

Proceedings of the Musical Association

Musical
Association (Great
Britain)

444 30.12.2(2.1)

THIS BOOK IS FOR USE
WITHIN THE LIBRARY ONLY



HARVARD COLLEGE LIBRARY

MUSIC LIBRARY

18

PROCEEDINGS
OF THE
MUSICAL ASSOCIATION

FOR THE INVESTIGATION AND
DISCUSSION OF SUBJECTS CONNECTED WITH THE
ART AND SCIENCE OF MUSIC.

FOUNDED MAY 20, 1874.

TWENTY-FIRST SESSION, 1894-95.

ALL EVENTS RESERVED.

LONDON
NOVELLO, EWER AND CO., 1, BERNERS STREET, W.
1895.

DGZ-93

A

Mus 30.12.2(21)

✓



UNIVERSITY
OF HARVARD, HARVARD COLLEGE
LIBRARY

CONTENTS.

	Page
" <u>INAUGURAL ADDRESS TO THE TWENTY-FIRST SESSION.</u> " By <u>SIR JOHN STAINER, M.A., Mus. Doc., Oxon.,</u> <u>D.C.L., President of the Association</u>	viii
" <u>MONTEVERDI'S ORGAN SONATA.</u> " By <u>F. G.</u> <u>EDWARDS</u>	1
" <u>FROM BRASS TO KEYBOARD:--NEW AND COMPLETE</u> <u>PRACTICAL SOLUTIONS OF ALL TECHNICAL DIFFI-</u> <u>CULTIES.</u> " By <u>W. NICHOLSON SMITH</u>	12
" <u>CURIOUSITIES OF THE KEYBOARD AND THE STAFF.</u> " By <u>ARTHUR EDGERS</u>	33
" <u>A FEW WORDS ON THE SUCCEEDING EDITIONS OF</u> <u>BENTHAM'S NINTH SEMILOGY.</u> " By <u>SIR GEORGE</u> <u>OSBOR, C.B., D.C.L., &c.</u>	65
" <u>ON SOME CAUSES OF THE CHANGES OF TONE-COLOR</u> <u>PRODUCING IN THE MOST MODERN ORCHESTRA.</u> " By <u>CHARLES MACLEAY, M.A., Mus. Doc., Oxon.</u>	77
" <u>THE NOTATION OF THE FIFTEENTH VIRGINAL BOOK.</u> " By <u>J. A. FRISSE HAYLAND, M.A., F.S.A.</u>	103
" <u>MADE MUSIC.</u> " By <u>W. H. GILL</u>	115
" <u>THE TRUMPET AS AN ORCHESTRAL INSTRUMENT.</u> " By <u>WALTER MORRIS</u>	123
" <u>ADDRESS OF WELCOME TO THE AMERICAN MUSICIANS</u> <u>ON THEIR VISIT TO ENGLAND, 1893.</u> " By <u>THE</u> <u>PRESIDENT, SIR JOHN STAINER, M.A., Mus. Doc.,</u> <u>Oxon., D.C.L., Professor of Music in the University</u> <u>of Oxford</u>	149
" <u>THE INFLUENCE OF MUSIC.</u> " By <u>WALDO SELDEN</u> <u>FOOTE, M.A., Professor of Music and Hymnology,</u> <u>Hartford Theological Seminary, Hartford, Conn.,</u> <u>U.S.A.</u>	153

RULES AND REGULATIONS

Passed at Six Special General Meetings, held on February 7 and April 3, 1876, on January 6, 1879, on December 6, 1886, on June 2, 1890, and on January 7, 1893.

OBJECTS AND CONSTITUTION.

1. This Association is called the "Musical Association" and is formed for the investigation and discussion of subjects connected with the Art, Science, and History of Music; and is intended to be similar in its organization to existing Learned Societies.

It is not intended that the Association shall give concerts, or undertake any publications other than those of their own Proceedings, or the Papers read at their Meetings.

MEMBERS.

2. The Association shall consist of practical and theoretical musicians, as well as those whose researches have been directed to the sciences of acoustics, the history of the art, or other kindred subjects.

Any person desirous of being admitted into the Association must be proposed by two members. Foreigners resident abroad and distinguished in the Art, Science, or Literature of Music may be nominated by the Council for election as Honorary Members of the Association.

Elections will take place by ballot of the members present at any of the ordinary meetings, and one adverse vote in four shall exclude.

No newly elected member shall be entitled to attend the meetings until the annual subscription be paid.

SUBSCRIPTION.

3. The annual subscription to the Association is one guinea, which shall become due on the 1st of November in each year.

Any member may, upon or at any time after election, become a life member of the Association by payment of a composition of £100 con. in lieu of future annual subscriptions, but in addition to any annual subscription previously paid or due from such member. Such sums shall from time to time be invested in legal security in the names of Trustees, to be appointed by the Council.

Any member intending to resign his membership shall signify his wish by notice in writing to the Secretary on or before the 31st of October, otherwise he shall be liable for his subscription for the ensuing year.

MEETINGS.

4. An ordinary meeting shall be held on the second Tuesday in every month, from November to June inclusive, at 8 p.m., when, after the despatch of ordinary business, Papers will be read and discussed, the reading to commence not before 8.40 p.m.

5. An annual general meeting of members only shall be held at the end of the financial year, to receive and deliberate on the Report of the Council, and to elect the Council and officers for the ensuing year.

6. Special general meetings may be summoned whenever the Council may consider it necessary; and they shall be at all times bound to do so on receiving a requisition in writing from five members, specifying the nature of the business to be transacted. At least one week's notice of such special meeting shall be given by circular to every member, and ten members present at any general meeting shall constitute a quorum.

7. Every member shall have the privilege of introducing one visitor at the ordinary meetings, on writing the name in a book provided for that purpose, or sending a written order.

COMMUNICATIONS.

8. Papers proposed to be read at the meetings may treat of any subject connected with the Art, Science, or History of Music, Acoustics, and other kindred subjects.

Papers will be received from or through any member of the Association.

Experiments and performances may be introduced, when limited to the illustration of the Paper read.

9. All communications read will become therewith the property of the Association (unless there shall have been some previous arrangement to the contrary), and the Council may publish the same in any way and at any time they may think proper.

REPORTS.

10. A Report of the Proceedings of the Association, including the Papers read or abstracts of the same, and abstracts of the Discussions, shall be printed and distributed to the members as soon as possible after the end of each session.

This Report will be arranged and edited by the Secretary, under the direction of the Council.

COUNCIL AND OFFICERS.

11. The management of the affairs of the Association shall be vested in a Council, to be elected by ballot at the general meeting of the members.

The Council shall consist of a President, Vice-Presidents, and ten ordinary members of the Association.

The Secretary of the Association shall be *ex officio* an ordinary member of Council.

The President, Vice-Presidents, Auditors, and five ordinary members of the Council shall retire every year, but shall be eligible for re-election.

12. At the annual general meeting, the Council shall present a balloting list, showing the names of the persons whom they propose for the offices of President, Vice-Presidents, and ordinary members of Council for the ensuing year. A copy of this list shall be given to each member present.

In voting, each member may erase any name or names from the balloting list, and may substitute the names or names of any other person or persons whom he considers eligible for each respective office; but the number of names on the list, after such erasures or substitution, must not exceed the number to be elected to the respective offices as above enumerated. Those lists which do not accord with these directions shall be rejected.

The Chairman of the meeting shall cause the balloting papers to be collected, and after they have been examined by himself and two scrutineers, to be appointed by the members, he shall report to the meeting the result of such examination, and shall then destroy the balloting papers. Auditors shall be appointed at the annual general meeting by the members, and the statement of accounts shall be sent by the Treasurer to the Auditors, and be reviewed by them to the Secretary in time to enable the Council to judge of the prospects of the Association, and to prepare their report in accordance therewith.

13. The Council and officers shall meet as often as the business of the Association may require, and at every meeting three members of Council shall constitute a quorum.

ENACTMENT OR ALTERATION OF RULES
AND REGULATIONS.

14. No rules and regulations can be enacted, altered, or rescinded, except at a special meeting of members summoned for the express purpose, the summons stating distinctly and fully the matter to be brought under consideration.

MUSICAL ASSOCIATION.

FOR THE INVESTIGATION AND DISCUSSION OF SUBJECTS
CONNECTED WITH THE ART AND SCIENCE OF MUSIC.

FOUNDED MAY 29, 1874.

COUNCIL.

PRESIDENT.

Sir JOHN STAINER, M.A., Mus. Doc., Oxon., Prof. Mus. Univ. Oxon.

VICE-PRESIDENTS.

ARNOLD, WILLIAM GUYLLA, Esq., M.A., F.R.S., Professor King's College.

BROADBENT, E. H. M., Esq., M.A., F.R.S., F.R.S.

BURTON, J. F., Esq., Mus. Doc., Oxon., Organist of Westminster Abbey,
Organist Prof. of Music.

CARR, GEORGE F., Esq., M.A., FdL, Tru. Coll., Camb.

CROFTES, W. H., Esq., F.R.A., Hon. F.R.A.M.

DEVEREUX, F., Esq., Hon. FdL & M.

GLASS, MARION, Esq., M.D. (Mus.)

GLANVILLE, F. E., Esq., Mus. Doc., Camb.; Hon. F.R.A.M.

GREENWOOD, JOHN, Esq.

HAZEL, Sir GEORGE, Gt. D.C.L., LL.D.

HARRIS, JAMES, Esq., Mus. Soc., Camb.

HARRIS, C. HERBERT H., Esq., Mus. Soc., Oxon. at Camb.; Chappell Univ. Oxon.,
Director of the Royal College of Music.

HILL, WILLIAM, Esq., F.R.S. L. and E., Mus. Doc., Oxon.

PARSONS, E., Esq., B.A., Lond., Mus. Doc., Dub. at Edin., Prof. Mus. Trin. Coll.,
Dub.

REYNOLDS, Sir HEN. LOUIS, M.A.

SCHUBERT, Sir ARTHUR, Mus. Doc., Oxon. at Camb.

ORDINARY MEMBERS OF COUNCIL.

BAKER, J. PERCIVAL, Esq. (Secretary).

BALFOUR, B. C., Esq.

BARRY, C. A., Esq., M.A.

FOSTER, MILES B., Esq., A.B. & M.

MACDONALD, WALTER, Esq.

PARSONS, CHAS. W., Esq., Mus. Doc., Camb.

PERKINS, A. H. D., Esq., M.A.

STODOLSKY, W. DE HARVEY, Esq.

STODOLSKY, THOMAS LEA, Esq.

TRIST, CHARLES, Esq., Mus. Doc., Oxon.

TRUSTEES.

Sir JOHN STAINER.

Sir J. FRED. BAKER
Esq. GEORGE HARRIS.

HON. TREASURER.

H. C. RANBY, Esq., 9, Strand Arcade, Southampton Hill, S.W.

HON. AUDITOR.

DAVID JAMES BURNETT, Esq.

HON. SOLICITOR.

ARTHUR T. CROFTES, Esq.

SECRETARY.

J. FRED. BAKER, Esq., Winstanley House, Worlington Road, Old Chertsey.

HONORARY FOREIGN MEMBERS.

Gonsert, Maximus F. A. (Brussels).

LIFE MEMBERS.

Alexander, Lecky, Esq.

Benson, Captain Alex. Esq.

Blackley, David James, Esq. (Wim. Auditor).

Bosnages, R. H. M., Esq., M.A., F.R.S., F.C.S., Fellow of St. John's College, Oxon. (Vice-President).

Bragden, F. R., Esq.

Hobson, Esq. W. J., B.A. Lond. (New Zealand).

Briggs, H. G., Esq. (Oxford).

Spoorswood, W. Hugh, Esq.

Watts, F. Cunningham, Esq., M.A., Mus. Soc., Oxon. (Oxford).

MEMBERS.

Adams, W. Grylls, Esq., M.A., F.R.S.
Fellow, King's College. (Vice-President).

Austin, E., Esq.

Aldridge, Richard H., Esq. (Southport).

Aspell, W. I., Esq. (Liverpool).

Baker, J. Percy, Esq., A.R.A.M. (Secretary).

Baxter, H. G., Esq., Prof. R.A.M.

Benson, John Francis, Esq.

Berry, C. A., Esq., M.A.

Buck, Frederick H., Esq.

Bullock, Oliver D., Esq.

Burroughs, Rev. E. S., M.A., Mus. Soc., Oxon.

Burns, C. T., Esq.

Butcher, J. R., Esq., F.R.C.O.

Chamberlayne, J. F., Esq.

Clarke, Colonel C. W., Mus. Soc., Dub.

Crashaw, Estlin J., Esq. (Derbyshire).

Edgar, J. Prof., Esq., Mus. Soc., Oxon., Organist, Westminster Abbey. (Vice-President and Treasurer).

Edison, J. E., Esq.

Evans, H. B., Esq.

Evans, Rev. M. L.

Fennell, Mrs. J. M. E.

Freeman, Miss Jeanine.

Campbell, F. J., Esq., LL.B.

Carr, Rev. Henry.

Carter, Mrs. Margaret, L.R.A.M., A.R.C.M.

Casson, Theo., Esq.

Chamberlayne, Mrs. E. A.

Chen, Susan, Jan., Esq.

Chen, G. A., Esq.

Cobb, Gerald F., Esq., M.A., Tan Coll., Camb. (Vice-President).

Coburn, W. W., Esq.

Cockin, G., Esq.

Colford, John C., Esq.

Colford, W. S., Esq.

Coxley, F., Esq.

Cresser, Miss E. E.

Cubrick, James C., Esq., Mus. Soc., Dub.

Cummings, W. H., Esq., F.R.S. (Vice-President).

Curran, J. S., Esq., F.R.A.M.

Devanport, F. W., Esq., Hon. F.R.A.M. (Vice-President).

Douglas, Colonel.

Edgar, Clifford B., Esq., Mus. Soc., London, S.W.

English, F. de G., Esq., M.A., Mus. Soc., Oxon.

Evans, Harry, Esq., A.R.C.O.

Federson, Ruthven, Esq.

Fisher, T. Dunsey, Esq.

Forster, Myra Robert, Esq., A.R.A.M.

Fox, Arthur M., Esq., Mus. Soc., Lond.

Franks, Lucina, Lady.

Garcia, Manuel, Esq., M.D. Hon. (Vice-President).

Gaskell, James, Esq. (Somerset).

Glavin, F. E., Esq., Mus. Soc., Hon. F.R.A.M. (Vice-President).

Goldsworthy, Geo., Esq. (Vice-President and Treasurer).

Goodman, A. M., Esq., M.A., Mus. Soc., Camb. (Hon.).

Gray, Alan, Esq., LL.M., Yrla Coll., Camb., Mus. Soc., Camb.

Gray, Mrs. Kate.

Green, Sir George, C.B., D.C.L. (Vice-President).

Haggar, J. Treadwell, Esq., F.R.S.A.

Harting, H. A., Esq., Mus. Soc., Oxon.

Harris, Richard, Esq.

Hawgood, A., Esq., R.N.

Hawgood, Rev. Ernest, M.A.

Harbert, George, Esq.
 Haydon, The Rev. F. H. (Canterbury)
 Haynes, Miss Florence G. E., Miss
 Esq. Lond.
 Hays, James, Esq., Miss Esq., Queen
 (Vice President)
 He, Arthur, Esq., B.E., M.E.C.A.,
 F.R.I.B.A., (Dorset)
 Hoffman, Frederick A., Esq.
 Holmes, Henry, Esq.
 Hope Jones, E., Esq., M.I.R.E.
 Hurd, H. A., Esq., A.R.A.M. (Wey-
 mouth).
 Isaac, Alfred E., Esq., A.R.A.M.
 Johnson, N., Esq., Miss Esq., Canab.
 Kerkland, A., Esq.
 Knox, Brewster D., Esq.
 Lucy, F. St. John, Esq., A.R.A.M.
 Linton, Miss Anne M., L.R.A.M.,
 A.R.C.M.
 Lathams, Alfred H., Esq.
 Lloyd, Clara H., Esq., M.A., Miss
 Esq., Queen, (Windsor)
 Longman, W. H., Esq., Miss Esq.,
 Canab. (Canterbury)
 Maclean, Charles, Esq., M.A., Miss
 Esq., Queen
 MacLennan, Walter, Esq.
 Mackenzie, Miss E. A.
 McLaughlin, W. G., Esq., A.R.A.M.
 Marley, Charles, Esq.
 Mouton, Thos., Esq.
 Napier, Edward W., Esq., M.A.,
 Esq., Esq., Canab.
 Nash, P., Esq., Prof. Mus. Univ. Edin.
 Paul, C. G., Esq., (York)
 Palmer, E. Davidson, Esq., Miss
 Esq., Queen
 Palmer, Percy H., Esq.
 Parry, C. Robert H., Esq., Miss Esq.,
 Queen at Canab., Director, Esq.,
 Canab. Miss (Vice President)
 Payne, E. J., Esq., M.A.
 Peacock, Chas. W., Esq., Miss Esq.,
 Canab.
 Pearson, J. W., Esq., (Weymouth)
 Peck, Wm., Esq., F.R.S., Miss Esq.,
 Queen (Vice President)
 Pope, Campbell, Esq., M.D.
 Presingham, A. H. D., Esq., M.A.
 Prescott, Miss Olivia, A.R.A.M.
 Pridley, Miss Edith, F.R.C.O.,
 (Brighton)
 Price, G. H., Esq., L.R.A.M.
 Prior, E., Esq., B.A., Lond., Miss
 Esq., Dub. at Edin., Prof. Mus.
 Trin. Coll. Dub. (Vice President)

Randall, Geo. Albion
 Rayleigh, Right Honourable Lord,
 M.A., F.R.S. (Vice President)
 Reynolds, W. J., Esq., Miss Esq.,
 Lond.
 Richell, Mrs. J. Barrow
 St. Leger, Wm. Douglas, Esq.
 (Midway)
 Simpson, W. de M., Esq.
 Staines, Percy V., Esq.
 Sturges, Jas. H., Esq., B.A.
 (Simpson, F. J., Esq., Miss Esq., Queen,
 Esq., Manchester & Vicar, L.R.A.M.)
 Sutcliffe, Thos. Leat, Esq.
 Symonds, Collingwood, Esq., B. E. L.,
 M.A., Miss Esq., Queen
 Talbot, Sir John, M.A. Miss Esq.,
 Queen (President and Treasurer),
 Esq., Esq., William
 Tarrant, C. Villiers, Esq., M.A.,
 Miss Esq., Queen at Canab., Prof.
 Miss Esq., Canab.
 Telford, Sir Arthur E., Miss Esq.,
 Queen at Canab. (Vice President)
 Thomas, Gordon, Esq., F.R.C.O.
 Taylor, Franklin, Esq. (Windsor)
 Taylor, James Esq., Miss Esq., Queen,
 (Oxford)
 Taylor, Henry, Esq., M.A., Trin. Coll.,
 Lond.
 Thomas, John, Esq.
 Thomas, Herbert G., Esq., A.R.C.O.
 Thornhill, Miss McCraith
 Tollerenden, Lady Sybil
 Topham, George G. T., Esq.
 Tuckett, Arthur, Esq., F.R.C.O.
 Tuxford, John, Esq.
 Vane, Miss
 Vernon, Chas. Esq., Miss Esq., Queen
 Wygon, E. P., Esq.
 Ward, A., Esq.
 Walker, Fred, Esq.
 Watson, H., Esq., Miss Esq., Canab.
 (Manchester)
 Webb, Gilbert, Esq.
 Webster, Mrs. C. A., L.R.A.M.
 Welford, Edward T., Esq. (Bristol)
 Welch, W., Esq., M.A.
 Wemyss, Miss Hilgard (Newcastle-
 on Tyne)
 Weyman, Mrs., A.T.C.L. (Lincoln)
 White, His Honour Judge Mackdon,
 Q.C.
 Whitton, A., Esq.
 Williams, C. F. Abdy, Esq., M.A.,
 Miss Esq., Queen
 Williams, Mrs. E. A.
 Woolley, Miss (M.B. Wales)
 Yeaman, Harry O., Esq.

MUSICAL ASSOCIATION.

TWENTIETH SESSION, 1894-95.

REPORT.

THE Annual General Meeting was held at the Royal College of Organists, on Tuesday, November 13, 1894.

SIR JOHN STRAUSS in the Chair.

The following Report of the Council was read by the Secretary:—

The Council have pleasure in presenting to the Members the Report of the Twentieth Session. During the past year papers have been read by Messrs. E. W. Naylor, W. H. Cummings, and J. T. Hanson, Mrs. J. M. E. Brownlow, Captain C. R. Day, and Messrs. Walter Wyatt, Louis N. Parker, D. J. Buckley, and James Higgs. The Association is greatly indebted to the various writers for their valuable and interesting papers.

The Council express a hope that the Members may, during the approaching Session, avail themselves more fully of the opportunities offered by this Association for hearing and discussing papers on interesting subjects connected with the Art and Science of Music. When Members are unable to be present themselves they will be increasing the usefulness and influence of the Association if they will exercise more fully their privilege of sending friends.

The Accounts show a balance in hand. Members would greatly facilitate the Treasurer's work and free the Council from anxiety by promptly paying their subscriptions when due.

The following Members of Council retire from office by rotation : Messrs. H. C. Barister, W. de M. Sengdon, M. B. Foster, Ridley Prentice, and Dr. Charles Vincent. They are eligible for re-election, but Members have the right to nominate any others for office.

Papers or short communications for the Monthly Meetings are received from or through Members, these and suggestions as to suitable subjects and capable writers will be gladly considered by the Council.

Members are desired to make the Association and its objects as widely known as possible. The Secretary will forward Prospectuses and Nomination Forms on application.

Members preferring to do so can pay their Subscriptions through their Bankers. A form for this purpose may be obtained of the Secretary.

Any change of address should be promptly notified to the Secretary, as occasional complaints of the non-receipt of books and notices are usually traceable to either old or insufficient addresses.

THE MUSICAL ASSOCIATION.

New Treasurer's Statement of Receipts and Disbursements from October, 1893, to November, 1894.

Dr.	£	s	d	Ct.
To Balance on Hand				10 11 3
— 4 Subscriptions, 1893-94, in advance	4	4	0	
— 99 " " 1893-94		10	10	
— 8 " " 1894-95		3	3	
— 8 " " 1895-96		3	3	
— 1 " " 1896-97		3	3	
— Sale of "Proceedings"				1 1 3
— Divided on £100				3 3 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0
				104 8 0

INAUGURAL ADDRESS

TO THE

TWENTY-FIRST SESSION,

BY

SIR JOHN STAINER, M.A., M.D., Oxon., D.C.L.,

PRESIDENT OF THE ASSOCIATION.

BEFORE calling upon Mr. Edwards to read his paper, we have the pleasant task of congratulating ourselves. The Medical Association has existed for twenty years, and now enters on its twenty-first year. It might occur to many that twenty years is not a very long period in the history of a society; but, on the other hand, a vast number of similar associations do not attain to half our age, and it must be remembered too that we have no imposing buildings to catch the eye of the public, and we have no royal charter enabling us to flatter our vanity by adding letters after our names.

Wise societies, like thoughtful individuals, seize the opportunity of having reached a landmark in their existence for the purpose of reviewing the past and looking forward into the future; we will do so to-day.

Has the Medical Association done all that it should or could have done during the past twenty years? and is its heart sufficiently firm to ensure its continuance? As most of you know, the initial idea of this Association was started in Oxford, in the house of the late Dr. Corle. During an interesting conversation with Dr. Cayc and Dr. Pole, I expressed a regret that physicians did not possess any organisation for encouraging and collecting information or papers on special subjects connected with our art. I was told I ought not to lose sight of such a scheme, and when I found myself settled in London I made the first attempt at establishing it by calling together a meeting, which was very influentially attended, there being present, amongst many other distinguished men, the late Mr. William Spottiswoode, F.R.S., Mr. A. J. Ellis, F.R.S., Professor Whewell, Professor Tyndal, Sir George Macfarren, Dr. Halliell, Mr. William Chappell, Dr. Stone, Sir John Goss, J. Henry Greenbach, and Thomas Holmes. Fortunately for us, the secretaryship was undertaken by Mr. Charles Salmon, whose

musical knowledge, social influence, and unending perseverance rapidly placed the Association on a sure foundation, and to whom we owe a distinct debt of gratitude. Looking back over the papers which the Association has called into existence, I think they are for the most part interesting and valuable contributions to the literature of our art. When glancing through my volumes of "Proceedings" I was quite surprised to find the large number of learned articles we have received from the pens of distinguished men and women.

If it will not bore you I should like to remind you of some few of the leading papers, grouped under special heads:—

INSTRUMENTS.

Kettle Drums (Portugal).
Trumpets (Haskins).
Clavier Instruments (Hiplins).
Corpses of String Instruments (Stone).
Growth of the Orchestra (Prest).
Viola da Gamba (Payne).
Egyptian Flutes (Seasholtz).

PHILOSOPHY AND ÆSTHETICS.

Medical Criticism (Salomon).
Musical Æsthetics (Dowling).
Underlying principles of Musical Structure (Barnard).
On some bearings of the Historical method on Music (Robert Parry).
The Emotional Effects of the Sister Arts (George A. Osborne).
Musical Psychology (Gerard Cobb).
Music as a Language (Barnard).
The Composer's Intuition (Jacquet).
Musical Design (Preston).
Limits of Musical Expression (Carson).
From Rhythmic Pulsation to Classical Outline (Wiles).

ACOUSTICS AND SOUNDS.

Temperament (Bonanquet).
Standards of Pitch (Stone).
On our Perception of the Direction of a Sound (Lord Rayleigh).
Philosophy of Harmony (Pole).
On the Sensitiveness of the Ear to Pitch (Ellis).
Absolute Pitch (Lord Rayleigh).
Beats and Combination tones (Spottiswoode).
Just Intonation (Ellis).
On a Mode of Producing Continuous sounds from Resonators (Bonanquet).

NATIONAL MUSIC AND SCHOOLS OF MUSIC.

The English School of the Sixteenth Century (Max).
 Irish Music (St. John Leary).
 Ancient Musical Traditions of the Synagogue (Cohen).
 French Popular Songs of the Fifteenth Century
 (Brownlow).
 Music of Japan (Piggott).
 Indian Music (Day).
 Russian Ecclesiastical Music (Wickbeck).
 Ecclesiastical Music of Western Europe (Quashey).
 Early Italian and Spanish Treatises on Counterpoint and
 Harmony (Quashey).

PSYCHOLOGY OF MUSIC.

On the Mechanism of the Human Voice (Schubert).
 Medical Science in relation to the Voice (Lemon
 Brown).

PRACTICAL MUSIC AND ANALYSIS.

The Vocal Art (Santley).
 Musical Nomenclature (Hulsh).
 Consecutive Fifths (Gladstone).
 Art of Fugue (Higgs).
 Fugal Structures (Prest).
 Rhythmical Construction of Bach's Fugues (Abdy-
 Williams).
 Sol-fa Syllables (McNaught).
 Music in Public Schools (Parker).
 Music in Elementary Schools (Marredale Brown).
 Manuscripts of Beethoven (Shedlock).
 Chords (Conder).
 Music in the Royal Navy (Haverhill).
 Flats, Sharps, and Naturals (Hicks).

BIOGRAPHY, AND PERSONAL NOTICES.

On the Musical Inventions of the late Sir Charles
 Wheatstone (Professor Adams).
 Henry Purcell and his Family (Cummings).
 Berlioz (George Osborne).
 Norrville Bennett, his Life and Works (O'Leary).
 Handel and Bach (Sir G. Macfarren).
 Life and Work of Sir G. Macfarren (Barnard).
 Life and Character of Sir Frederick Quashey.
 Wagner (Carr).
 Samuel Wesley (Higgs).

I have gathered the titles of these papers together whilst
 merely skimming over the surface (as it were) of our published
 "Proceedings." Surely we have no reason to be ashamed of

the work done by the Association. Book collectors are beginning to place a complete set of our books in the corner reserved for treasures, and no wonder.

So much as to the past. Now let us think about the future. We have lost many of our earliest and most distinguished supporters by the inevitable hand of death. We want to create a little more interest in our work amongst the rising generation of young musicians. I am afraid our younger brethren think the Musical Association a nest of old fogies. We must remove this impression by getting them here, at all events, to listen. We want our members to bring more friends as visitors, and so spread more widely the influence of the Association. Many abstain from joining as members because, if they cannot attend regularly, they think they will not "get enough for their guinea." I venture to plead with them. May I beg them to consider not so much what *they* will "get for their guinea," as what a lot of good they will do to the art and science of music by their guinea. If no such body existed as this our Association, no learned society for interchange of thought amongst cultured musicians, it would be little short of a scandal. We are financially prosperous, we not only have no debts, we even have a respectable sum invested in the names of Trustees, so please understand that it is the moral support which we ask of our brother professionals, far more than their cash. Lastly, any short paper will be welcomed by the Committee, any account of a curious book, or picture, or composition; and we should like to hear a little more discussion after the papers are finished. Musicians are not usually credited with the qualities of sobriety and rhythm, and at our meetings we would gladly dispense with these troublesome virtues. On one occasion when I was in the chair, having tried my utmost to provoke a discussion, I made a funeral pause of considerable duration and ultimately closed the meeting. Imagine my surprise at finding, a few days afterwards, a letter in a musical newspaper in which the writer complained that he and others had much to say, but that they were unable to say it owing to the abrupt end of the meeting having suppressed discussion. I will promise to make a longer pause another time, even if it should give visitors the impression that they have accidentally come to a Quakers' meeting. I hope all those who are so good as to listen to my short address to-night will try to get more extended support for the Association, by securing more members, more visitors, more readers. I really think the Council are justified in appealing to their records of the past twenty years as a proof that good work has been done, and that we have a real claim for help and confidence in the future.

November 13, 1894.

SIR JOHN STAINER, M.A., M.O., D.C., OXON., PRESIDENT,
IN THE CHAIR.

MENDELSSOHN'S ORGAN SONATAS.

By F. G. EDWARDS.

I venture to think that no apology is needed for bringing before you the subject of Mendelssohn's Organ Sonatas—those works which have long been accepted as "classics" of the organ.

I shall not presume, before such an audience as this, to enter upon any methodical description or technical analysis of these familiar works; my purpose is to refer to the history of their composition and publication, and also to point out some of the differences between the original MS. and the published version. In this way I shall endeavour to throw some side lights on these masterpieces of organ music which I trust will interest you.

In 1844, just fifty years ago, Mendelssohn paid his eighth visit to England. He conducted five of the Philharmonic Concerts and entered now and then into the doings of that brilliant musical season during his two months' stay in London.

Immediately after his engagements in London were over, Mendelssohn rejoined his wife and family at Soden, near Frankfurt-on-the-Maine. Here is a picture of his home-life at that time, described in his own words:—

Soden, near Frankfurt a/M.,
July 22, 1844.

After my most most idle life in England—the worst before with anything like this season—my even visit to bed before halfpast one, every hour of every day was filled with engagements; three weeks' rehearsal, and I got through more music in two months than in all the rest of the year—this late at Soden, with no dining and sleeping, without dinner-rest, without piano, without visiting cards, without carriage and horses; but with dogkeys, with wild flowers, with music paper and sketchbook, with Cicely and the children, is doubly refreshing.

It was at Soden and Frankfurt, amidst most congenial surroundings, that Mendelssohn wrote his organ sonatas during 1844 and 1845. But why did he choose this particular period for their composition? The answer to this question is not without interest.

Mendelssohn's organ playing—of Bach and his own wonderful extemporizations—had been a remarkable feature of his several visits to England. Some of the leading organists who were fortunate enough to hear him wished that he would write some pieces in various styles for their instrument. Mr. Coventry, of the firm of Coventry and Hooper, music publishers, 71, Dean Street, Soho, communicated this desire to Mendelssohn during his visit to England in 1844—in fact, Mr. Coventry really “solicited” Mendelssohn to write these organ sonatas. It is, therefore, interesting to know that the world is indebted to an English publisher, acting on the initiative of some English organists, for this important contribution to the literature of the organ.

I have been allowed to see the correspondence which passed between Mendelssohn and Mr. Coventry on the subject of the publication in England of the organ sonatas. This correspondence, which is entirely in English, also contains some interesting letters relating to the English publication of Bach's *Organ Chorales and Preludes*, which Mendelssohn edited for Coventry and Hooper, and which were duly issued by that firm. (I may say, in passing, that the subject of the early introduction of Bach's music into England—its publication in this country, and early performance—would be an interesting subject for consideration by this Association.)

The following are some extracts from the Mendelssohn-Coventry correspondence relative to the publication of the organ sonatas.

(Mendelssohn to Coventry.)

Frankfort, August 29, 1844.

I have also been very busy about the organ-pieces which you wanted me to write for you, and they are nearly finished. I should like to call them “3 Sonatas for the Organ,” instead of *Voluntaries*. Tell me if you like this title as well. If not, I think the name of *Voluntaries* will suit the pieces also, the more so as I do not know what it means precisely.

The original idea, either Coventry's or Mendelssohn's, seems to have been only three sonatas. The term “*Voluntary*” was doubtless suggested by Coventry, who subsequently wrote to Mendelssohn: “London, 19 Nov., 1844. I like the term *Sonata* just as well as *Voluntary*.” Mendelssohn, who had promised to send the sonatas, if possible, before the year was out, wrote to Coventry:—

Frankfort, Dec. 17, 1844.

I hope to send you soon the promised organ-pieces. I am busy, but I want to have as before I make a parcel of them.

May 2, 1845.

I beg you will let me know whether a letter, which I wrote to you some weeks since, has reached you or not. It contained the communication that I had written a kind of Organ-school in six lessons for that instrument, and the question whether you would like to have the whole work or only one half of it.

1000

I duly received your favour of the 14th April, and, as I have no objection to your donating my *Centurus* to your books, I was very glad to see that they are to appear altogether in your library. I even think it would be worth to sell each *Centurus* separately, if somebody wants to have them so. As it must always be written in the title of "the *Centurus*, No. 1, &c." May, if you please, in your engraver's hands, be him be most anxious, in order to get a correct edition. I attach much importance to these *Centurus* [?] I may say so of any work of mine, and accordingly wish them to be brought out as correctly as possible. Perhaps some one of my English friends and British *Anglo* players would look them over for me, besides the usual correctness of the proofs. Perhaps Mr. Thomson would do so?

It seems that Vincent Novello, and not Dr. Gosselt, looked over the proofs, as is shown by the original proof-copy, now in the possession of Mr. Julian Marshall, and which he has kindly allowed me to see.

The following is a copy of the original advertisement, announcing the publication of the session, which appeared in the *Medical World* of July 24, 1844:—

MENDELSSOHN'S
 SCHOOL OF ORGANS-PLAYING

© 2005 Blackwell Publishing Ltd *Journal of Internal Medicine* 258: 103–110

Have the pleasure of announcing that they are about to publish, by subscription,
SIX GRAND SONATAS FOR THE ORGAN.

100

WILLIAMS, MORTIMER L. JR. EAST HOLIST

Figure 11. 7a. Red in *Hydrophilum* sp. 11. 7b. Red in same *Hydrophilum* sp.

The monthly performance of the above highly rated Mutual Funds, as the result of the action of the New York Board of Governors, as well as the other State Boards, in the determination of the rates of interest on loans, has been such as to give the companies a very high rate of return on their investments. The result of the action of the New York Board of Governors, as well as the other State Boards, in the determination of the rates of interest on loans, has been such as to give the companies a very high rate of return on their investments. The result of the action of the New York Board of Governors, as well as the other State Boards, in the determination of the rates of interest on loans, has been such as to give the companies a very high rate of return on their investments.

the 1990s, the number of people with HIV/AIDS in the United States has increased from 100,000 to 1.2 million. In 1995, the CDC reported that 100,000 people died from AIDS-related complications, and 1.2 million people were living with HIV/AIDS. The CDC also reported that 100,000 people were newly infected with HIV/AIDS in 1995. The CDC also reported that 100,000 people were newly infected with HIV/AIDS in 1995.

[illegible]

100

London, W. From Street, John Innes, where a list of the subscribers to, and supporters of, the work may be seen, and a list of names of additional subscribers will be sent.

The title "Mendelssohn's School of Organ-playing," suggested in Mendelssohn's letter to Coerver of May 1, 1845,

(see p. 2), was subsequently withdrawn at the composer's wish, and the work was issued in its present form—"Six Sonatas for the Organ."

The sonatas were published in October, 1843, by subscription, at one guinea per copy. Of the original subscribers there are still living Miss Elmsbeth Mourner—who retains pleasant recollections of Mendelssohn's playing on the organ at St. Peter's, Cornhill, when she was organist there—Mr. W. T. Best, Dr. E. J. Hopkins, and his brother, Mr. John Hopkins (of Rochester), Mr. B. St. J. B. Joske, Dr. R. G. Monk, Mr. Kellow J. Pye, Dr. Rea, and others. 150 copies were subscribed for, which amounted to £150 10s. Mendelssohn received £50 for the English copyright. The metronomic marks were added by the composer at the special request of Mr. (now Dr.) E. J. Hopkins. Mendelssohn pencilled them on the proof copy.

The work was dedicated to Dr. F. Schumann, a lawyer, of Frankfurt. He was an intimate friend of Mendelssohn's and subsequently became a relative by marriage.

A long review—a column and a half of small type—appeared in the *Morning Chronicle* of March 10, 1846—one of the leading dailies of the time—from the pen of Dr. Gauntlett. Here is a specimen of Dr. Gauntlett's style:—

"The fourth sonata will be the favourite in England, and if not the most admired or the most picturesque is yet the most beautiful of all the six. The first movement is a hymn of praise. It is a Bach psalm, and yet not Bach: Mendelssohn brings him up to date, into the great Nineteenth century and their Churches hallowed organs. The speech for expansion and extended analysis has passed away, the movement of leading points and subtle analogies are unknown; we want strong emotion, but it must be concentrated—it must centre rather in the electric self—it must draw blood. And this is Mendelssohn. And this is the prelude to the fourth sonata. Turn to the last page (page 42). Look at that soaring bar with its seventh on the F pedal: dwell on the heart quivering march up the pedal from the lower E flat to the F on the second and third staves, and then "give thanks," and thank "for ever."

An early copy of the German edition of the sonatas must have come into the hands of Robert Schumann, who, in a charming letter to Mendelssohn (dated "Dresden, October 22, 1845"), thus refers to them:—

" Only the other day we became quite glorified in your organ sonatas, and naturally only at the piano. But even without the like-piano we should have found out that they were by you. And yet you are always striving to advance still more, and by this means you will ever be an example to me. These intensely personal new ideas—what a golden picture they form in every mind! To Bach's music I always imagine him sitting at the organ, but in yours I rather think of a St. Cecilia sounding the hymn and how delightful that that should be your wife's name! Short all, this, and it seems to me splendid. It is really a fact, dear Mendelssohn, no one else writes such fine hymns, and they keep on giving power and more joy."

I cannot find any record of Mendelssohn's having played his organ sonatas in public. He was evidently asked to do so at the Birmingham Festival of 1846, when his "Elijah" was produced; but he wrote to Mendelsohn, saying: "The last time I passed through Birmingham the touch of the organ appeared to me so heavy that I could not venture to perform upon it in public. If, however, it is materially improved, I shall be happy to play one of my sonatas; but I should not wish this to be announced before I had tried the organ myself." A private performance of them by Mendelssohn is thus recorded by Mr. W. S. Rockstro, who visited the composer at Frankfurt in the spring of 1845. Mendelssohn proposed to Mr. Rockstro that they should go to an "open-air concert," and he led the way to a lonely corner of the public gardens, where a nightingale was singing with all its heart. "He sings here every evening," said Mendelssohn, "and I often come to hear him. I sit here sometimes when I want to compose. . . . I have just finished some sonatas for the organ, and if you will meet us at the Catharinen Kirche, at 10 o'clock to-morrow, I will play them to you." He played them exquisitely—the whole six, straight through, from the neatly written MS. "I remember," says Mr. Rockstro, "the wonderfully delicate staccato of the pedal quavers in the second movement of the fifth sonata, which he played upon a single 8-foot stop, with all the crispness of Dragonetti's most highly finished pianos!"

In a letter to his sister, Fanny Hensel, Mendelssohn thus refers to his playing of the sonatas: "Frankfurt, April 29, 1845. I will play them [the Organ Sonatas] to you at Ober-Liedersbach—that is to say, by those at a time, for all six are too fatiguing, as I found the other day when trying them."

The late Dr. Chapp, of Ely, an enthusiastic admirer of Mendelssohn, was one of the first—probably the first—English organists to play the organ sonatas in public, at an Organ Recital at Walker's organ factory in April, 1846. Dr. Chapp on one occasion played the whole six in succession, entirely from memory! He also had the honour of playing the third sonata to Mendelssohn on the organ at the Banquet Square Rooms, and received from him the following testimonial!—

I have heard Mr. Edmund Chapp perform on the organ and the manner in which he played one of the most difficult of my Organ Sonatas has given me a very high opinion of his talents and his skill as a musician and as a performer.

London, 21st May, 1846.

FELIX MENDELSSOHN BARTHOLDY.

The sonatas were slow in becoming known in England. Chosley, in recording a performance of No. 1, by Mr. W. T. Best, on Willis's organ in the Great Exhibition of 1851, said: "The noble organ sonata was new to us." This was written nearly six years after the date of publication.

Amongst the collection of manuscript of music I find that a Herr Laback played on two occasions, at the Musical Union, the *Finale* of the first organ sonata "arranged for the piano, by Laback." Another "taking" in the way of arrangement (or arrangement?) was that of a Mr. Edwin Flood, who adapted sacred words to six movements from the sonata.* Only three of the six (Nos. 2, 3, and 4) are in the British Museum (received there March 5, 1847), and as these were published during Mendelssohn's lifetime, he may have prohibited any further watering down of his organ sonata. The appropriateness of the words to No. 6—"Oh! that my head were waters," adapted by Mr. Flood—will not escape attention.

It is now time to refer to the second, and more technical, part of our subject—a comparison between Mendelssohn's original intentions and the published version of the sonata.

I have been very fortunate in getting access to a MS. copy of *five* of the sonatas, in Mendelssohn's own autograph, which their fortunate possessor, Mr. Arthur O'Leary, has kindly allowed me to examine. Nearly all the movements in these MSS. are written on two staves, the vocal part being indicated by the word "Vcl." The manuscript, like all Mendelssohn's writing, is the perfection of neatness: he was artistic even in his cleasures.

Through the kindness of a member of the Mendelssohn family, I have been equally favoured by the loan of a copyist's MS. of the sonata, which contains alterations in Mendelssohn's own hand. This copy, in the opinion of Professor Joachim, is that from which the printed (German) copy was engraved.

With the aid of these two MSS. it is possible to trace some of the alterations made by Mendelssohn. I use the word "some," because his own original MS. copies, preserved in the Imperial Library, Berlin, would probably show still further changes. It would take too long to note all the differences between the composer's earlier intentions and those recorded in the printed version of his sonatas. I can only refer to the more important afterthoughts. (I may

* Six movements from Dr. Felix Mendelssohn Bartholdy's celebrated Organ Sonata Op. 65, adapted to words, and dedicated, by permission, to Dr. Samuel Sebastian Wesley, by Edwin Flood.

No. 1. *Spring into the Lord, Sonata 1.*

Trio.

No. 2. *Have mercy upon me, Sonata 2.*

Solo.

No. 3. *Altehuus, Peace and Glad Sonata 3.*

Quartet.

No. 4. *Oh! every one that thirsteth Sonata 4.*

Duo.

No. 5. *Holy, holy, holy, Sonata 5.*

Duo.

No. 6. *Oh! that my head were waters Sonata 6.*

Solo.

mention that, in one of his unpublished letters, Mendelssohn speaks of the constant alterations he made in his compositions as "a disease" from which he chronically suffered.)

SONATA I.

This was originally No. 3 of the set, No 3 (in A) being No. 1. Mendelssohn inverted the order in the pencil copy.

First Movement—The title of the chorale (Bar 40) is given in the MS., "Was mein Gott will, das g'heh' ich an." Bar 41 in the pedal, instead of crotchets B $\sharp$, the first beat was B $\sharp$ and E $\sharp$ above (quavers). The latter note was probably deleted because it was not in the compass of the pedal organ of that time. Anyone who has a feeling that the chorale sounds then when played on the great organ with the moving pedal (bars 43, et seq.) will be interested to know that Mendelssohn doubled the melody in the octave below. Bars 98 and 99 will furnish an example—



The pedal quavers, beginning at the half bar of 96, were originally—



The movement originally concluded thus—



* See Nos 41, 103, 110, and 115 of Bach's "216 Versöhnliche Choralorgelstücke."

Exposition.—The close was originally an eight-bar instead of a seven-bar phrase, and ended thus:—



Last Movement.—At bar 25 the fine effect of the low pedal D against the E in the left hand was not in the original. At that particular bar (26) the D (held from 23) moved up to E (accidental) in octaves with the left hand, and in the next bar (27) to the next note, F# (natural). The low pedal C, at bar 200, originally began four bars earlier. Mendelssohn, with rare judgment, afterwards changed it for the octave above (bars 22-23), as printed. The crotchet rest in the penultimate bar was an afterthought, the chord originally occupied the whole bar; and the final chord contained that note F (first space, treble staff) which so many organists naturally put in.

Sonata II.

Adagio.—This was originally written in 4/4 time, its notes of double length, crotchets for quavers, &c. The movement ended thus, so far as I can decipher it through the confusion, the penultimate bar being a little doubtful:—





Allegro moderato.—The dots to the quavers, which form such a strongly marked feature of this movement, were afterthoughts (see bar 44 in the following examples).

Bars 24-25, 42-44 stand thus in the MS. :—



The fine effect of the descent of the pedal to the lowest C in bar 44 (was this a change for the better?) will not escape notice. The diminished seventh chord, in bars 24 and 42 of the printed version, is absent in the MS., as shown above.

Fugue.—The subject of this fugue is the same as that of one of three organ fugues composed by Mendelssohn in 1839 (MS. dated = Frankfurt, d. 24 [alt. 1839?], five years before the sonatas were written; but the exposition and subsequent treatment of the fugue are quite different in this sonata as compared with the earlier version.

Sonata III.

This sonata, which was originally No. 2, is only in a copyist's hand in Mr. O'Leary's set of the MSS. There are two interesting references to Sonata III. in Mendelssohn's published letters. He evidently wished to incorporate into it a movement he had written for his sister Fanny's wedding during his visit to Wales in 1843. One of the extracts may be quoted: the letter, to Fanny Hensel, is dated "Berlin, July 25, 1844."

Look for the organ piece in A major that I composed for your wedding, and wrote out in Wales, and send it to me immediately; you shall positively have it back, but I require it. I have permitted an English publisher to furnish him with a whole book of organ pieces, and as I was writing out one after another, that former was ordered to me. I like the beginning but don't like the middle, and am rewriting it with another (short) fugue, but should like to compare it with the original, as you send it here. . . . Do not forget the organ piece, and send him no answer.

He wrote a second letter, dated "August 15, 1844," asking his sister to make further search for the piece, but apparently without result, as the two movements of this sonata are dated "Aug. 9" and "Aug. 17, 1844," respectively. It seemed possible that the Welsh piece might still be found amongst Frau Hensel's papers and MSS., but Hans Sebastian Hensel, in response to a recent inquiry, is unable to trace this interesting MS. sent by Mendelssohn to his sister to be played at her marriage ceremony.

Sonata IV.

First Movement.—In bar 28 the twelfth consequence is C $\sharp$ in the MS., which note has always been printed C $\natural$.



Mr. W. T. Best, in his edition (Novello), makes the above bar the same as bar 80.

Andante.—This movement was originally written in common, and headed "Andante alla marcia."



Allegretto.—Mendelssohn originally wrote a second crutch in the pedal part in the following 9 bars, where

there are now corresponding rests: Bars 3, 5, 11, 13, 25, 26, 38, 44 (this bar begins with a low pedal F), and 50. The withdrawal of these pedal notes considerably lightens the progress of this characteristic Mendelssohnian movement.

Last Movement.—The bars introductory to the fugue do not appear in the original MS. The movement begins with the fugue subject in the pedal, and concluded thus:—



There is another version of this fugue in MS. (dated "Frankfurt, 2 April, 1843"), in which the subject is slightly different:—



It will be noticed that the ornaments in the first bar of the above extract are much more difficult to pedal than those in the printed version; probably this was the cause of the alteration. This MS. fugue, which is quite complete, while similar to the printed version (but without the introductory bars), has many points of interest.

SONATA V.

Andante con moto.—Mendelssohn first wrote this movement in the *dance* minor, but subsequently changed it to the *relative* minor, in the key we now know it. In this (B minor) form there was originally a counter-subject at the return of the first theme (bar 24).

This sonata had an extra movement, which came between the *Andante con moto* and the *Finale*. It consisted of a repetition of the Chorus, but with different harmonies and the addition of passing notes in the inner and pedal parts.

Here is the first phrase:—

Last Movement.—This has often been a puzzle to organists in regard to the disappointing result of the skip of the octave in those places (e.g., bars 4, 7, 17, &c.) where it is smothered by heavy chords. It is, therefore, interesting to find from the MS. that Mendelssohn's original intention was to make frequent changes of manuals in this *Adagio*. He uses the direction "Clav. I," or "Clav. II," no less than thirty eight times in the movement. These directions were subsequently crossed through in pencil. It is probable that he may have thought the frequent changes gave a restlessness to the movement; or, still more probable, that the want of balance of tone between the great and swell manuals—and especially the limited bass compass of the latter—in the organ of that time would have nullified the effect of his registering. Without printing the music in full it would be impossible to give a satisfactory idea of Mendelssohn's intention, but I quote the opening here as a specimen. —



In bars 7, 8, 13, the octave skip is marked "Clav. II," while in bar 17 it is indicated "Clav. I"; this will give some farther idea of the original plan in regard to the change of manuals. It would be interesting to hear this movement played, as Mendelssohn first registered it, on one of our modern organs.*

SONATA VI.

The two MSS. of this sonata that I consulted seem to be "clean" copies. I have, therefore, not been able to trace Mendelssohn's possible alterations. Most probably his own copies, preserved at Berlin, would show many changes. From the Thieriot Catalogue of the Berlin MSS., I find that the last movement was originally written in crotchets and in 3-4 time.

* It has more been pointed out to me that in the Lisoff Edition, the above, Dr. W. Walther, indicates in this movement an interchange of manuals similar in design to Mendelssohn's original idea.

Mr. Edwards then played a MS. "Nachspiel" for "Organo Parvo," in D, which Mendelssohn composed in Rome, in 1831. The first four bars—which appear three times in forty-five bars—of the Introduction are identical (except the dotted notes) with the opening of the 3-4 movement in the second sonata, but the remainder is different.



A five-part fugue follows on the subjoined short subject:—



and brings this effective composition to a brilliant conclusion on a tonic pedal thirteen bars long.

The remaining "illustrations" were some MS. movements which Mendelssohn had written for the organ, but which were more than he wanted for "the parcel" he was going to send to Mr. Coventry. One of these movements, which is quite complete and worthy of publication, is an air with variations, of which the following is the opening phrase:—



Permission to obtain transcripts of these MSS. from the Imperial Library at Berlin, for the purposes of the present paper, had been kindly accorded to Mr. Edwards by a member of the Mendelssohn family.

DISCUSSION.

THE CHAIRMAN.—I am sure we are very grateful for this admirable and interesting paper. We shall all, in future, listen to these organ sonatas with great interest. I think it was most fortunate that Mendelssohn was asked to write for the organ. I do not know whether many of you have had the same opportunities as I have had of noticing the wonderful organ parts in his oratorios. In England, I am sorry to say, for many years the organ, in the oratorios, was generally looked upon as a great bore, many people thinking that it was only useful to keep the voices in tune, to help them out of a difficulty, or to assist them when they were uncertain. I always played Mendelssohn's organ parts from the full scores, and I found them quite a study as works of art. He never puts a mark, order, or direction which is not of enormous advantage to the general effect. Let me advise young organists therefore to do exactly what he tells them. He was indeed a master of the instrument, and it must be a pleasure for us to know that English people encouraged him to write these sonatas.

MR. EDWARDS.—In the chorus in "Elijah," "Blessed are the men who fear Him," at the passage in D, "Through darkness reach light to the upright," I may mention that originally the organ was not intended to come in there. It was Dr. Gounelli who put it in, at the rehearsal (in 1846) on his own account, and Mendelssohn afterwards said that when he heard it he felt cold all down his back for he wondered what was going to happen. However, he liked it so much that it was inserted, and it adds a very fine effect, the organ coming in on the chord of D, and at the beginning of the bar, before the soprano lead.

MR. H. C. MANWELL.—Caenstry and Holier were also the great patrons of Siradale Bennett. I know from my master, Cipriani Potter, that the firm issued a circular soliciting subscribers for the organ sonatas, and one went to an eminent organist, who, however, replied that there were plenty of composers in England quite as good as Mendelssohn.

MR. GILBERT WISE.—Among the most interesting details which the lecturer's researches have revealed is the correspondence with reference to the title that Mendelssohn's organ compositions should receive—namely, "Voluntaries" or "Sonatas." It would seem as though he had set himself to write a series of organ pieces rather than a series of sonatas, and that the latter title was given them because, when completed, they more approached the form of a sonata than of a voluntary. Every organist went hoping that Mr. Edwards may be able to arrange for the unpublished pieces played by him, and originally written for the sonatas, being published.

The *Cantabile*.—In reference to the editing of these sonatas, may I enter a protest against the manner in which some editors have and twist the author's method of writing his works. Many editors have totally disregarded Mendelssohn's plan of writing. The next best thing for music to sound well (or read) was that it should look well on paper, and he was a composer who gave a great deal of consideration as to how a passage should be written. Some editors attempt to excuse themselves by saying that they try to make the music easier and more plain for young people. I only hope these young people will soon get older. The speed at which the *Finale* of the First Sonata is taken must depend a great deal upon the size of the building, although Mendelssohn said it was to go as fast as possible. In St. Paul's Cathedral I found it necessary to play it slowly. It would be interesting to trace the origin of the chorales which Mendelssohn introduced into these organ sonatas. Several are well known; but I have never been able to trace that used in the opening of Sonata 5. I, however, see someone in the room (Mr. Otto Goldschmidt) whose intimate acquaintance with the literature of German chorales would enable him to give us valuable information on the subject.

A vote of thanks to Mr. Edwards was then passed unanimously.

DECEMBER 15, 1894

WALTER MACFARREN, Esq.,
IS THE CHAIR.

FROM BRAIN TO KEYBOARD:—NEW AND
COMPLETE PRACTICAL SOLUTION OF ALL
TECHNICAL DIFFICULTIES.

By W. MACDONALD SMITH.

"I WILL use my influence to get you appointed organist to a deaf and dumb asylum." So said, with quaint humour, a professor to a lady who had been lamenting her technical inefficiency and telling of the delights of enjoying fine music by reading it over in an arm chair, where she said she could play it "as her mind" to perfection. And many of us have doubtless dwelt upon the beauty of a favourite movement in like manner, unconcerned by the technical imperfections of our fingers. But unfortunately music in general is not quite such an imaginative and ethereal art as all that, and requires for its interpretation, first and foremost, no doubt, the musical soul and musical brain; but secondly, the delicately regulated contractions of certain muscles to produce the sounds from whatever instrument is being played. In the case of the pianoforte, the deservedly popular instrument of our time, very great attention and study have been given to that part of the mechanism which intervenes between keyboard and string; but it is to the remaining part of the chain—and this chain, in all others, is no stronger than its weakest link—that I wish to draw your attention to-day; trusting that you will in no wise consider me an interloper, or a trespasser upon ground sacred either to the expert pianoforte maker or to the experienced piano-

teacher, seeing that my task has been simply to reflect, in the sense of *mens*, hidden principles of physiology and anatomy besides those of mechanics, and to apply them to the perfecting of this weak link. That this technique, this link between brain and keyboard—in a word, this perfection of muscular control—is the weak link in the chain, needs, I think, no confirmation—every performer knows it only too well, from the girl of nine who cries over her scales, to the concert-player who laments that the artifice practice he knows not how to avoid is eating the soul out of his playing.

The great number of points which this study brings up cannot possibly be dealt with and discussed in the short time available at one of these meetings. This being the case, it seems probable for me just to give the outlines of the system leading to the remarkable results which several who are present can practically attest to, and then leave a somewhat longer time, after the paper, for the discussion of any questions which may suggest themselves to the experienced teachers or others present, and tend to the furtherance of the cause I have at heart, and upon which much of my spare time has been spent during the past nine years.

The application of the study of gymnastics to the requirements of the pianist or organist is by no means new, but had I the time, I think would be gained by describing the methods and apparatus hitherto invented. Many of you will have read the books published on the subject or used one or other of the apparatus recommended. Advantage has certainly been gained by them; but in a case of this sort one is somewhat reminded of bridging a mountain torrent by throwing a log across—if, in falling, it reaches the opposite bank by only an inch, it is as good as useless, and with keyboard players, if the method adopted is not absolutely complete, almost as much arduous labour has to be gone through at the instrument to overcome one difficulty as to overcome a dozen.

What is it exactly that constitutes a beautiful "touch"? The common opinion is that "touch" cannot be described nor defined—that it is a natural gift not to be taught or imparted. Professors of repeats have endorsed this view to a large extent, perhaps owing to an inaccurate perception of the precise line to be drawn between the artistic or mental part of playing and the mechanical. Yet, putting "rhythm" and "feeling" or "sentiment," vaguely called "expression," aside for the moment, "touch" is nothing but the way of striking the keys, and if to some minds this is not very clear, the mechanical piano may help me to explain my meaning. No sentiment worthy of the name can be given to music played by machinery; but the touch of the best of these

machines in its "runs" is unanswerable, solely because a rapid scale in a passage is which sentiment may almost be left aside. What the pianist wants is ability to express the sentiment of all music on his instrument as perfectly as the other does the song. I grant that individual character must give each one a different style of playing, but we are satisfied that the touch, depending necessarily and solely upon the condition of the human mechanism of nerves and muscles intervening between brain and fingers, can be perfected and taught with little trouble, though former methods have really afforded no certain means for so doing. A little reflection will show us that the hand is by no means naturally suited for playing the piano and therefore requires to be most carefully adapted to its new work. The short thumb, with its lateral movement, is certainly most handy in many passages, though the majority of players make and misuse of the thumb-under movement. The other fingers are all of different lengths and various strengths, and owing to our constant use for everyday purposes of the first two and the thumb, the third and fourth are relatively very weak. Add the fact that the thumb is never used for an "up-and-down" movement except in piano playing, and that the tendons of three of the fingers are by nature tied together in a manner most provoking from the pianist's point of view, and we have here an irregular combination of fingers usually requiring a vast amount of training before they can be made to play a really even scale or arpeggio; and yet these are not the chief difficulties, as I shall endeavour to show.

Without going into long anatomical descriptions, I would remind you of the fundamental fact that all the movements of the fingers, hands, and arms in playing the most difficult music are effected solely by the sudden and regulated contractions of certain muscles. These muscles, in order to produce the rapid movements required, must be used frequently and rapidly, or the dense, partial or entire, will make them sluggish in obeying the willpower which causes them to act. Each finger, including the thumb, has a muscle to raise it and another to depress it. The muscles themselves are situated in the forearm, and it is the tendons only from these muscles which pass through the wrist and are inserted in the last joints of the fingers. If both be contracted at the same time, the joint action of the two muscles pulling along the sides of the joints keep the fingers stiff; if both are relaxed, the fingers are in a state of balance, perfectly loose. There are muscles which act on the whole hand at the wrist in the same way, and which produce all the so-called wrist movements so important for the pianoforte player. The thumb has special muscles which are used for the "turning under." The fingers are moved laterally by some very small

muscles placed in the hand, and which are used in playing any arpeggio. In short, the hand and arm are provided with ample means for performing each of the following five parts of movements:—

1. Of the fingers (and thumb) up and down (as in striking the notes):—



2. Of the whole hand from the wrist, up and down (as in playing a chord), or sideways (as in playing a slow legato arpeggio on the white notes):—



3. Of opening and closing the palm of the hand, including spreading apart of the fingers and thumb (as in many pianoforte passages):—



4. Of the forearm, moving the hand to left and right along the keyboard (as in playing octaves on white notes):—



5. Of the forearm, backwards and forwards (as required in a chromatic scale in octaves):—



and all the variety of movements used by the pianist will be seen to be only combinations of the above simple cases.

Taking former systems in quite a general way, the following are the reasons why they have not been complete:—

1. That the "up" movement of the finger has too frequently been neglected, resulting in sad failure in playing "legato" and difficulty in acquiring satisfactory "staccato."

2. That the muscles above the elbow were not fully exercised, whereas it will be seen that they are very important.

3. That the stability of the shoulder, considered as a foundation of the arm's movement, has been quite overlooked, as also the natural tendency of the forearm to rotate, in playing, round a longitudinal axis.

4. That the "thumb under" movement has been much neglected, and the "hollowing of the hand" never (to our knowledge) mentioned.

5. That "full contractions," the importance of which will be afterwards explained, were not thought likely to produce the exact effect desired, and, therefore, never suggested as a solution of the difficulty.

6. That no adequate criteria of real independence have been afforded, as may be given by certain *leit* exercises at the piano.

7. That as any of the above omissions would soon make itself felt in playing, mistakes have been found only partially satisfactory.

Let the objection should be raised that there are distinguished pianists who have never given attention to the development of the muscles of the shoulder, I would beg you to reflect what a minute proportion out of all the hard-working pianists ever attain or merit celebrity; and that it is not wonderful that one or many thousands should be naturally gifted with a muscular development of unusual perfection, enabling him practically to interpret musical ideas such as many feel and understand, but find it impossible to express on the instrument.

I could go into many interesting particulars about the reasons why a child finds such difficulty in commanding his fingers when he comes to the piano, but there is no time, and I must content myself with the statement of a general principle. A certain movement, to be done perfectly and strongly, necessitates the use of a certain group of muscles. When well developed these obey the mental impulse without hesitation; but there is a natural provision, most providential for everything but piano playing, and in virtue of which, if the proper muscles for the movement are weak, other stronger muscles take the work instead, and the movement is done, only awkwardly. The use of the finger muscles all together in chord playing, instead of those that move the wrist independently, is an instance of this, and hence the extreme difficulty usually found in sounding out any one note in a chord.

My new system, the outlines of which I am about to give you, is primarily based upon the principle that rapid and full contractions of any muscle develop it very quickly, not only in strength, but in quick and precise responsiveness to the mental call—a much more important factor for the pianist than mere strength or mere rapidity of action. Taking as a typical example the movement of a single finger, a person who can repeat a note on the piano three or four times in a second may, after a little proper exercise of rapidity, sound it seven or eight times in succession in a single second, and instead of the finger being tired after two seconds of this rapid movement, can continue it with ease for ten or fifteen. It is unnecessary for our present purpose to go into the precise physiological phenomena involved in muscular contraction, however interesting and however important in going into all the scientific details of the question of playing. I have gone thoroughly into the matter in all its details with competent medical men and physiologists. Unfortunately, there is no time to-day even to touch upon the interesting points raised in the study of the partial contraction of a muscle. We can, however, deal with a few plain and well proven facts, which are found in most physiological textbooks. They are as follows:—

1. The nervous impulse, which by stimulating the muscle causes it to contract, produces at the same time a dilation of the small arteries leading to it, and in this way makes a much larger supply of blood flow into it. You must remember that it is entirely from the blood that the muscle derives the nourishment, which not only enables its fibres to grow and develop but gives it its capacity for work. Even a large muscle will have little endurance if there is not an abundant flow of blood through it. The stronger the nervous impulse the greater the increased supply of blood, and it is on this account that the exercises I shall describe must be performed briefly.

2. A full contraction (such as occurs when a muscle is contracted until for the moment it is quite hard) causes compression of the small blood vessels in the muscle, and as any pressure upon veins causes the blood to flow onwards towards the heart, the blood from which the "goodness," so to speak, has been extracted, goes on its way to the breathing lungs and its place is taken by fresh blood from the arteries. It is during rest that the muscle develops by feeding upon this blood left in it. On these two simple principles it is that a species of exercise is founded, by which I find it possible to develop muscles to their full—a vastly different exercise loop that in which they are called upon to do heavy work, as with most apparatus, or at the pianoforte, where excessive practice may lead to cramp—as it does more

often than is generally supposed—instead of to the healthiest possible development.

The principle of exercise by rapid and full contraction sounds perhaps very simple; but in applying it to the further exigencies of piano playing we are met by many further difficulties, which will entirely vitiate results unless they are properly understood and provided against.

I wish none of my assertions to be taken on trust, and, although by the gymnastic exercises prescribed in my system the student can overcome all difficulties if he only attends carefully to instructions, the anatomical reasons for the different movements have been carefully gone into, to prove that they are exactly those necessary to bring about the desired end of attaining and keeping up a "perfect couch" and a high degree of elevation. I must ask you to excuse me from demonstrating the whole set of six exercises here to-day, not because I am unwilling to make them public, but because I have found that from merely once showing they are rarely retained exactly, although few and concise, and results obtained would therefore not be satisfactory with any who should set themselves to put the system to a test. If the authorities on pianoforte teaching will honour me by confirming the favourable opinions which practical results with pupils of all classes have hitherto elicited, the work will shortly be published in book form, and then, from carefully made descriptions of the movements, with reproductions of photographs, the student may learn them for himself, although one is obliged to confess that just as languages learned without a master are rather lame productions, so this system is necessarily much more complete when learned by personal instruction, as people vary so very much in natural muscular development, and elevation and good touch are therefore attained more rapidly and thoroughly by the master's attention to each individual case. I will therefore show you one or two of the more important exercises, that you may practically see and appreciate how the results are obtained. The whole set takes about four minutes to go through with each arm, and should be done only twice daily, night and morning, or after any long spell at the instrument.

This is the first of the set (showing H), and is for acquiring independence, strength, and delivery of control over the flexor and extensor muscles of the fingers. You will observe that a rapid and full contraction is given both to the muscles used in striking the notes and to those used in lifting the fingers. The words *Offense* and *Defense* thoroughly express the two positions I show, and it is from one to the other that the hand must be changed as rapidly as possible. It is the briskness (not violence) of the individual movement that is

important, you should observe, and also the completeness of it—the fulness, that is, of the contraction. It is of no importance to perform a great number of repetitions in a given time. A dozen or so is quite enough at a time if correctly done, as it should be distinctly remembered that it is during the subsequent rest that the muscle develops, and not during the performance of the exercise. Let the student or piano teacher should fancy that this exercise for the fingers, moved all together, may have perhaps the advantage of saving time, but that to exercise each one separately would be more thorough and effectual, I should again explain that separate exercise cannot possibly give them the full development they receive by the above movements. And though the effect of separate finger movements with appropriate apparatus has been tried by me in every variety, I unhesitatingly affirm that independence, strength, delicacy of touch, every necessary quality, is preferably acquired as above.

Another exercise for the forearm is as follows. The superficial observer would be inclined to say that this movement (showing H.) of striking out and recovering the arm quickly, is about all the exercise you can give from the elbow joint; but I assure you that if done in that way it gives complete and fullest contraction to no one muscle. And any one may prove it, for if you double up the arm in that way with the palm turned towards you, you will find that the biceps muscle is contracted; but if you turn the palm away from you, it is no longer the biceps that does the work but other muscles! This movement (striking upwards) is done by the muscles at the back of the arm—but these are not exercised thoroughly except in this position, as if done so (striking horizontally) the muscles in question do not act all the time owing to a mechanical question of weight, and therefore do not get a full contraction.

The full set of exercises gives full contraction to every muscle of the hand and arm, and thereby imparts full development and perfection of mental control to all of them, and, though this may be rather questionable to some minds, not one is superfluous to the first-class pianist. The system, however, is most incomplete unless supplemented by explanation of a few crucial points hitherto overlooked by inventors of gymnastic apparatus, for otherwise it is impossible to imagine that such indefinite results should follow the arduous study gone through by so many.

To begin with, "*quick repetitions*" exercises are *physically* impossible with *slow* muscles, by which I mean that in the example mentioned of repeating a note with one finger, or in playing a scale, involving exactly the same difficulty, the reason of this difficulty is generally not so much that the

muscle is weak as that it and its tendon are, through neglect, loosely strung. I have made a little apparatus which will show you exactly what takes place (apparatus shown and explained). In the real hand this tightening of the muscle, unless natural, cannot be acquired thoroughly by any amount of piano practice, and is only to be accomplished by executing *full* contractions of the muscle, by which the muscle increases in volume *broadwise* all along its length, and pulls itself and the tendon very taut. This principle applies to any of the many-shaped muscles in the body as well as to those of the fingers. In the wristed and then arm of an imbecile the slackness of the muscles is very palpable, though they may once have been tightly strung enough. This practice of *full* contraction is of such utmost importance that I may be excused for enlarging on this point. It is unnecessary, as I before said, to prove to you theoretically that a few *full* contractions of a muscle do develop it in the quickest and best fashion. Those familiar with the subject know it to be a fact, and others can easily prove it for themselves in practice. And lest any should still think it foolish to say that in order to perform quick accurate movements of any part of the arm or hand it is indispensable that the muscle shall be perfect in its entirety, either by natural gift or by exercise of *full* contractions, they need only call to mind, among other instances that abound—

1. How a barber, in shaving a customer, then—that is, feels the necessity of—"slopping up" his arm muscles by occasionally giving a tug out in the air, or how he annoys another by giving spasmodic snaps with his scissors—that is, giving a little "full contraction" exercise to his thumb.

2. How a writing master will, before commencing an elaborate heading, make a flourish in space with his pen.

3. How pianists themselves are prone, *affectedly*, it is called, to lift the wrist up high, or, at the end of a passage ending in a very high or low note, to straighten the arm out (as a relief, they will tell you).

A muscle is developed just in proportion as it is *run*—in proportion, that is, as it is emptied of waste material and fed with fresh blood from the arteries. Quick and *full* contractions expel the used up blood along the veins and allow the muscle to draw in nourishment from the arteries almost as in the action of squeezing a sponge. Suppose you want to change the contents of a vessel of any sort, that you have, for instance, a pail full of salt water which you want full of fresh. Do you take a small ladle, and ladle alternately fresh water in and salt out, until the saltiness is no longer distinguishable? Even if the vessel were, for instance, a tank carved in solid rock, you would at all events find ladle

or pump out the salt water before putting in the fresh. And yet the impossibility of the first operation is on a par with what pianists are guilty of when they try to obtain the necessary development at the piano, and I do sincerely hope that, as they readily see that in the example given the best way to change the salt for the fresh water is to turn the pail bottom upwards and then just fill it, they will welcome a method of effecting a similar saving of time and labour by the rational development of their muscles to perfection.

The quick repetitive movements used at the piano, for which practice of full contractions are necessary, are, for the shake, full movements of the fingers, for repeated chords, of the wrist muscles; for octave shakes, full movements of those muscles of the upper arm which produce the lateral movement of the whole hand.

The third important point is one which, as far as we are aware, has received no attention whatever; we can find no mention of it in any work, nor do we know any master who carries it into practice except perhaps unwittingly. It is this: "The solidity of the shoulder considered as a foundation of the arm's movement." Full development of all the muscles of the wrist and arm may exist, and yet it may be found impossible to play quickly repeated chords lightly, or even heavily. The explanation is simple and can best be made clear by means of another simple experiment. Take an ordinary penknife, but not an old and rickety one; open the longest blade, hold the point of the blade firmly between the finger and thumb and try, by jerking the other end, to start the body of the penknife vibrating. It will not. Now fix the same point of the blade really firmly, by sticking it in a heavy piece of wood or by holding it in a vice, or even by pressing a hard substance on it at the edge of a table. It will now vibrate readily if touched, because the force used is not lost, but all utilized in making the knife oscillate, whereas in the former case the vibrations were dissipated and lost in the softness of the hand. Now as of course for the quick vibration of the hand, the forearm cannot be fixed in a vice while playing, the nearest approach to this condition must be made, and the upper arm must be held, by an effort, as firmly fixed to the shoulder as possible. When all the muscles are fairly developed, this fixing of the arm firm at the shoulder, and consequent facility in playing repeated chords, is quite easy of attainment, the advantage being perceived at once. In no games or calisthenic exercises I have seen are fullest quick contractions given to all the muscles which move the upper arm from the shoulder. With the exercises I recommend these muscles are developed very quickly, in a fortnight some effect is distinctly perceived, and at last no

trouble is found is making the arm move from a firm foundation, as it were, not in being able to fix the arm by one set of muscles while another set performs the actual movements necessary to carry the hand where required.

So much for the simple vibrations; but the importance of this foundation-making would be slight were the above the only use of it. A firm foundation is as necessary, however, for the execution of the most delicate passages as for quickly repeated chords. Our arm and shoulder form an engine, self-contained, and comparable for the purpose to a steam hammer, except that it is very light compared with the forces it exerts. The precision attainable with a steam hammer, rendering it capable of gently cracking nuts, &c., is well known, but see the absolutely firm foundation it requires! What would happen were the steam hammer fixed at the end of a long wooden beam or arm? (The steel rest is supposed fixed and not of a piece with the hammer, just as the piano keyboard is not of a piece with the arm.) Half the effect of the blow would be lost in shaking the steam hammer itself, and no amount of practice would ensure certainty in the exact force of the blow. The rigidity obtainable for the foundation of the arm's movements is not that of cast iron, but the voluntary contraction of muscles in several directions act just as the guy-ropes do in holding down the pole of a tent, and produce a firmness quite sufficient for the purpose.

A country lad, on returning home from a visit to a big off-shoot, was astonishing his open-mouthed relatives by recounting what he had seen, and added that there were lamps in the streets which burned without any wicks. "Now, you can stop," one of them scowled indignantly, "for besides not believing that, we now don't believe anything you told us before."

I almost fear to introduce the next and last proposition, but you should treat me as they did the historian of the gas lamps; but the fact is that the carrying into practice of the general development of all the muscles of the arm and hand, with attention to the crucial points mentioned, leads to the following remarkable result, no doubt as incredible to most of you as it was astonishing to myself a short time since:—

Fully developed fingers and arms make almost nothing of so-called difficulties of "Independence," which tend to vanish as muscular perfection is progressively attained.

Such difficulties are generally thought only conquerable by incessant complicated studies at the piano-forte, from lack of having observed that it is only with weak or little used muscles that this independence is so hard to acquire; or, to put it more correctly, that the dependence is so hard to overcome. A conclusive experiment, to be made by anyone, will

prove this to be as I state. Try the well-known gymnastic passive legs exercise themselves with, of rubbing one hand up and down the chest and patting with the other—you cannot do it! Spend one minute in giving your attention to the matter, and you have mastered it—they are fairly strong and often-used muscles that you employ. Now try to lightly tap alternately with the second and third fingers of the left hand quickly—as in playing a shake: probably you cannot do that except slowly, and even if you try for ten minutes you will only succeed in tiring the muscles and getting no better “independence”—it is because now you are using weak and undeveloped muscles. Or, if this is not convincing, compare the greatest rapidity with which a non pianist can perform this shake movement with the first and second fingers of the left hand and with the same fingers of the right. Those of the right will be found much more rapid in their alternate action, in spite of the fact that they are constantly used together in writing, which, according to the prevalent notions of independence, should make it much more difficult for them to move independently of each other. But they are better developed than the fingers of the left hand, and hence their superiority in the exercise given.

If I have succeeded in showing that exercise in full and rapid movements supports strength, rapidity, and independence, whereas any other sort of exercise gives strength only to the muscles, you will understand why I prefer to use the term “bright” to indicate the state of the perfect pianist’s muscles, and “dull” the state in which they usually are, the difference being just that between a bright boy and a dull one in responsiveness and intelligent action. Most people have a comparatively bright right hand and a dull left one, unless they have rendered them equally bright by thorough development on the principles described.

Critics say: Well, even if all the foregoing is correct, a large amount of daily practice at the piano is necessary even if only for “judging distances,” and thus acquiring what they term “locality.” My answer is that until they have had the pleasure of playing with a good set of “bright” muscles they can have no idea of the instantaneous way in which they will obey the will power; and my own experience is that “locality,” when once learned—and I certainly never mean to say that the piano can be learned by never playing—is learned once for all, and little forgotten, unless the piano should be quite neglected for many months. Besides, do we reflect what good “locality” means? It means much more than the mental judging of the distance from one position of the hand to another position. It means the power to instantly stop the hand, carried by the movement of the forearm, at precisely the spot that the eye or hand

indicates, and thus without stiffening the fingers! In no other part of piano playing is full development of such paramount importance as here. And if you will forgive another illustration, let us fancy boys playing a game of rolling balls along a yard, the highest score being for the one who rolls the ball so that it stops on or nearest to a line chalked across the yard. Immense practice would hardly ensure one of them being certain of scoring a "line", but supposing it were allowable to use a string to the ball, nothing would be easier after a few trials. The player with perfect development of the muscles which move the forearm is similarly placed. The action of his muscles is instantaneous, wherever he wills, whereas if they are "dull," as is *guy* cases out of 1,000, the *triquetrum* gives to the hand to reach a certain note carries it beyond it before the restraining action has time to take effect. This accounts for the separate long practice each piece of music requires under the present system, and for the readiness with which facility in particular passages is lost unless they are very constantly repeated.

If any teacher present doubts that a very definite connection exists between special difficulties found at the piano and the imperfect development of any particular muscle or muscles, I shall be happy, at the end of the meeting, to analyse for him any particular passage from this point of view.

I could tell you many interesting details about the "third finger" difficulty, and the attempts to remedy what has been considered by many as the only obstacle to pianoforte technique. But as the full contractions in the first exercise give such strength to the muscles which lift the third finger that it becomes as effective as the fourth, and can be voluntarily lifted in a bent position until the light is visible under it and over the second and fourth, we need not dwell more upon it.

Nature is most obliging and seems to be willing to supply us with whatever we ask for so long as we do so intelligently. She seems to say: "Here are limp and weak muscles, here are india-rubber and steel spring muscles, here are cast-iron muscles." He who prefers a *lazy* life wants muscles neither of spring steel nor of cast-iron—he gets lump and flabby, as he deserves. For the man who has very heavy and slow work to do, it would be convenient to be partly made of cast-iron, and Nature does her best to make his muscles hard, rigid, and able to lift great weights without fatigue, by actually solidifying the muscle by "consecutive tension," as it is termed. And if we as pianists want india-rubber and steel spring muscles we must go the right way about applying for them, or else Nature misreads our intention and either leaves them

limp and weak or gives us, after much wasting of labour (as in incessant piano practice), a second-rate imitation cushion article which we do not care for at all.

Grace, elegance, and delicacy of movement lie in the perfection of all the muscles, not in the unequal development of certain few—hence this grace, if not natural, is seldom acquired. Weakness is never graceful, but awkward. Complete muscular development is alone able to produce a hand like that of the naturally gifted ideal pianist, a hand which, perhaps, few know to be necessarily a firm and beautiful one; not excessively muscular in appearance, but rounded in every part; as also the wrist and arm, in which the even development fills up every hollow and results in a beauty of form and elegance of movement which otherwise hardly any obtain after childhood, even if they possessed it then.

And now, in conclusion. Truly musical souls exist where, perhaps, we least expect to find them; but are not easily accessible, as it were, because the musical sunshine they might impart is choked by the clouds and mist, figuratively speaking, of purely muscular incompetence, thus depriving us of the warmth and light we might otherwise enjoy, and preventing them from giving expression to the music they feel. Let us, therefore, seek ourselves of the means at our disposal for surely dissipating these mists, and so be enabled to discriminate at once between the false brilliancy of the unmusical soul and the great sunshine of the true musician.

DISCUSSION.

THE CHAIRMAN.—Ladies and Gentlemen, two little incidents have occurred to me during the last few days, which are sufficiently humorous and which certainly bear on this question. This very day a lady came and played to me for the first time, and told here was a very fine performance. In reply to my observation that she must do something to equalise her fingers, she observed: "Oh! my fingers are very equal; they are all equally weak!" The other incident was of a little girl who was with me some days ago, and on my observing to her that the third and fourth fingers were weak and that she must adopt some exercise to strengthen them, she remarked: "Yes surely, sir, if they were made weak by nature it would be lying in the face of the Almighty were I to do so." We must be very grateful to Mr. Macdonald Smith for his able paper and for his very kind explanation of his theory, in much of which I am bound to say I am at one with him. Indeed, I might quote

words of my own from my "Pianoforte Method," in which I said that we frequently hear of a good touch, yet sufficient importance is not generally attached to the acquirement of this almost indispensable requisite for good pianoforte playing; and I go on to say: "A good touch, which consists in the method of striking the keys and of withdrawing the fingers after striking the keys, emanates from the brain of the performer and is the medium by which he expresses his conception of the quality of tone required." I will just refer to one little point Mr. Smith advanced. He referred to the mechanical organ, and spoke of that as the perfection of touch. I grant him that it is perfection as regards the articulation of notes, but it lacks that which makes human performances interesting and acceptable—it lacks accent. Again, he said that touch was *never* a gift; now I contend, on the contrary, and I believe many of my hearers will bear me out, that touch is frequently a direct gift from nature. I have known repeated instances when persons with small practice have obtained beautiful effects on the pianoforte from the possession of a natural touch. Again, do we not know one performer from another by his or her touch, just as we know a singer or a speaker by the voice? The best possible argument Mr. Smith could have brought before us would have been if he himself had performed and shown us thereby the results of his nine years' experience of the exercise of the muscles to which he refers. In the absence of this we can only accept his own statement of the case, which, to some extent, I am willing to do. To a certain degree I believe that these gymnastic exercises will shorten the path of the student, for we must all be familiar with the exercises we adopt when we are out of practice and are called upon to play. Do we not exercise our muscles by pulling our fingers, cracking our knuckles, raising our hands and even our arms, which comes to much the same thing that Mr. Macdonald Smith has advanced? At the same time, I am inclined to think that we shall never do without what are called technical exercises. I have heard nearly every great pianist during the last fifty years, from Thalberg upwards. They acquired their wonderful manipulative skill by no such means as is suggested. They acquired perfection of tone and beauty and equality of touch entirely by means of the technical exercises which Mr. Smith deprecates. An instance occurs to me in the story of old John Cramer when he heard Dreychock. He remarked: "Yes, that is a remarkable performance, but you have no left hand." Dreychock, who was celebrated for performing in public with the left hand alone, said: "I believe my left hand is considered pretty good." Cramer answered: "No, you have no left hand." "I beg pardon," replied Dreychock, rather irritated

at this remark: "I fancy my left hand is as good as any other's." "No," rejoined Cramer; "you have no left hand, but you have two right hands."

Mr. MAGNENAU SMITH.—About touch being a gift; I certainly did not intend at all to convey the idea that touch was never a gift. Undoubtedly the best pianists are such because they possess this wonderful gift of touch. All I mean to imply is that touch depends upon the perfection of muscular development; that with some individuals very little technical exercise is necessary, and that in others only long years of practice have brought the pianist to the top of his profession. Mr. Macfarren referred to my playing, but on the same principle that some people have a beautiful touch naturally, I beg to say I am not at all prepared to consider it in any way a test of my system that I should play with a beautiful touch, because, however perfect it might be, the objection could be offered that I possessed it naturally. I would also specially ask you to consider the real meaning of the term suppleness, which has really as little to do with the actual conditions of the muscles and of the touch. If you should take a very old and worn-out clock with the mainspring broken you will not find that oiling the works will make it go. In the same way, unless you have good muscles to perform the rapid movements necessary you will find small advantage from gaining suppleness or pliability, which depends upon the condition of the ligaments and cartilages uniting the bones and is quite a secondary matter. If the ligaments are somewhat stiff it is true that the weak muscles are unable to overcome their resistance, but as soon as ever we strengthen the muscles sufficiently and in a right manner this small resistance is of no importance. It is only from weakness of muscle that such stiffness prevents our playing.

Mr. THORNTON.—Mr. Smith brought these exercises under my notice about a month or six weeks ago, and I tried them, but in the wrong way. Later on he showed me how to do them properly. I consider I am as bad a case—as good a case, therefore—as he could well get hold of. Though I have dabbled in music for many years I never went through any course of pianoforte study or regular practice of scales and exercises. I have only done my music by fits and starts. After about one month's trial of these five exercises, and not even then without occasionally omitting a day, I have no hesitation in saying that I have found a distinct improvement, both as regards finger and wrist movement and accurate playing, and I have become a complete convert to the method. I think that Mr. Smith's system, properly taken up, will be of immense assistance to the pianoforte student. I do not go so far as to say that it can be used as a substitute for

technical studies, but it goes further towards helping them than I fancy most of you are likely to believe at the present moment, and I sincerely hope that the system will meet with encouragement from practical people.

The CHAIRMAN.—Permit me to say that I consider this opinion of the greatest possible value. It is a practical opinion and affords just that evidence which I wanted, and I set great value on it. I, for one, shall have great pleasure in reading Mr. Smith's book when it comes out, and hope he will permit me to be a subscriber. I promise him patiently to investigate it, and, what is more, as a practical teacher I will test its efficacy. Now I think one duty only remains, and that is to express our heartfelt thanks to Mr. Smith for his most interesting and lucid address.

JANUARY 2, 1886

W. H. CUMMINGS, Esq.,

IN THE CHAIR.

*CURIOSITIES OF THE KEYBOARD AND THE
STAFF.*

By ALFRED RHODES.

MR. CHAIRMAN, LADIES, AND GENTLEMEN,—For some years I have been endeavouring to apply to the keyboard and the staff the principle which guided Sir Isaac Newton in his astronomical discoveries—*viz.*, “thoughtful attention to little things.” To this principle it is said Sir Isaac attributed all his success.

On the coast of Somerset, as the sun was setting over the Bristol Channel, an artist and a young lady were watching the waves as they rolled toward the shore. “What colour does the sea appear to you?” inquired the artist. “Oh! I see nothing but muddy water!” was her reply. “But look at the crest of that wave, what do you see there?” “A streak of gold.” “And what colour is manifestly under the golden thread?” “Oh! distinctly a bright blue.” Then said the artist, “Has a little thoughtful attention turned your muddy water into blue and gold?” “I could not have thought it,” she replied, “but as it is!” So corresponding interest and pleasure came with the discovered knowledge, and in this instance we see how the application of the principle before mentioned made manifest what had previously been unobserved.

Now, in my endeavour to apply this principle to the keyboard and the staff, not only have remarkable coincidences or curiosities appeared, but it led to the discovery of another ruling principle, that of a reflective design in the construction of the keyboard: for it was found to consist of identical

arrangement of white and black keys radiating from right to left of *c* as centres, D and G $\sharp$ or A $\flat$, and consequently some reflective design ruling its representative notation on two staves. The reflective aspects of single notes was also found to extend to intervals, chords, and especially to modulations, which seems to have guided, whether consciously or unconsciously, our greatest masters, with the result of producing some of their highest colouring and finest effects.

Now my object this evening is to make this clear to you.

One day it was observed that when the tips of the thumbs were together, the natural design of the open fingers was (say-like) that of inverted radiation. From this it was evident that any arrangement of keys adapted to their manipulation must, like them, have some centre for radiation and collecting design, and such design in black and white digits I found in the construction of the keyboard.

Mr. Chairman, before proceeding to illustrate this law of reflection, I wish it to be distinctly understood that it is not my purpose in any way to obscure the difficulties of the staff notation by introducing any method of reform; but rather to face boldly those difficulties, and show reasons for their existence, and then, a scientific method how they may be overcome; for it is well to note how the staff notation has grown with the ages and is now the vehicle for the transmission of musical inspiration among peoples of every civilized nation under the sun. From this it is evident that the introduction of any new method which requires abolition of the staff can scarcely be entertained, for it means new plant for the publisher; new instruction books; also, a new educational training for all teachers of the art. Students who discard the old for any new method are not able to read the music handed down to us from many generations, so that, after all, for educational purposes, the old notation must be learnt. All this and much more is involved in any attempt at a radical reform. There is no doubt that the notation with its flats and sharps is difficult to master, its complexity produces perplexity, and it is this fact which has provoked many to attempt its reform. Saying, however, that this is impossible (or least in our generation), say now light which may show some of its complications in simpler and more intelligible aspects will, it is reasonable to suppose, be welcomed by every musical student.

From papers.—Some years ago, during hours of endeavour to put musical notation clearly before young enthusiasts, it often appeared as though the notation itself were playing at cross purposes. In the first place, the bass stave notes were at cross purposes with those in the treble, for their corresponding positions did not agree in sense. The black ivory digits on the keyboard had no independent

names of their own, and for that reason had a double notation of flats and sharps, named from their nearest neighbours. There was a multiplicity of scale readings of major and minor keys, ever athwart each other's path; and if a composition said to be in a certain key was in hand, sharps and flats from other keys often intruded themselves, which, though colouring and expanding the resources of that key, nevertheless were cast at cross purposes with it. Under these complex aspects, the question often in mind was, how can this notation be intelligibly taught, so that it may be easily understood? Is there no way of classification? no method by which this chaos can become cosmic?

Position of C.—One morning I observed that A C E, both above and below the staves, read upward, occupied the same positions:—



and how, in both chords, C occupied a central position. It was also observed how the treble ledger lines numbered upward 1 2 3 and the bass downward 1 2 3 (the way all instruction books teach) made A and E show themselves at cross purposes:—



I asked myself, is C central to all the notes? It was evidently so, when I considered how the great staff of eleven lines showed C on its central line. Then drawing the two staves and playing C in every position, I perceived for the first time that if a mirror were placed between the staves, all the C's of one staff would be reflected in the other, even the

very ring of the G clef round the second line of the treble staff was found reflected in the F clef, round the second line from the top of the bass staff:—



A clear gain in the art of teaching.—This discovery of a reflective aspect of all C's seemed to be a clear gain in the art of teaching, for the bass and treble C's could easily be learnt two at a time, if only the lines and the spaces of the bass staff were numbered downward instead of upward.

Other staff notes.—At this time I had not discovered how it was possible to apply the reflective principle to the other bass and treble staff notes, for it was a disappointment to find that their reflective positions did not reveal the same names, and for some time further exploration was abandoned.

How were they found.—One Friday afternoon, when walking over Clapham Common from one professional engagement to another, and thinking upon what I had just been teaching—viz., key-notes and their respective key-signatures, my thoughts involuntarily glanced for a moment to the position C occupied on the key-board. Counting two semitones to the right of C showed D the key-note for two sharps, and to the left, B, the key-note for two flats.

Curiosity of Semitones.—This revealed a curiosity of coincidence between numbers of semitones on both sides of C and numbers of sharps and flats in key signatures. Regarding this C as a centre, my first thought was: Is the reflective principle applicable also to the key-board? Counting again from C upward, three semitones showed E, the key-note for a three-sharp signature, and downward three semitones A, a three-sharp key-note. But I asked how is this? Sharps according to their meaning should be upward and flats downward. Is the keyboard playing at cross purposes? and with the same letters, A and E, which at first attracted my attention at cross purposes on the staves.

At that moment semitone numbers radiating to the right and left of C were like rays of light from some star on the

dark horizons of my then vague conceptions of key-note radiation, and my attitude of mind was like the attitude of one of those who "seek for light, but behold darkness; for brightness, but walk in obscurity" (Isa. lxx. 9, R.V.); but, Mr. Chairman, to be able to see anything at all, showed there was light somewhere.

Now was the time for "thoughtful attention to little things."

In this state of mind the thought occurred—there must be another centre on the keyboard which will account for this contrary aspect of flats upward from C, and sharps downward. But where is it? that was the question.

Before I had crossed the Commons that afternoon, I discovered that my steps had unconsciously quickened, for light had broken out of obscurity, another star-centre had been found at F $\sharp$ or G $\flat$ whose rays in semitones numbers joined those from C, for three semitones downward from G $\flat$, showed F $\sharp$, the same note as three semitones upward from C; also three semitones upward from F $\sharp$ joined at A the three semitones downward from C. So that these notes were pointed at from two centres, as though some importance were attached to them, which may account for the fact why these notes combined, forming the distinguished seventh chord, are called by Sir John Stainer "the most important chord in music."



To the right and left of C, semitones to key-notes radiate by even numbers:—



"Theory of Harmony," p. 48.

To the right and left of $F\sharp$ or $G\flat$, by odd numbers:—

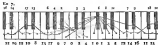


But it was also seen how, where the lines from C terminated on white keys, those from $G\flat$ terminated on black, and vice versa. Please observe the diagram: C to D, E are white keys; from $G\flat$ centre to $E\sharp$ and $D\sharp$ are black; from C, to $B\sharp$ $A\sharp$ $G\sharp$ are black keys; from $F\sharp$, to G A B are white. From both centres you see black keys are downward and white upward.

This discovery of a second centre at $F\sharp$ or $G\flat$ accounted for my perplexity, and explained completely why the keyboard had played so adroitly with me at cross purposes. Even numbers of semitones were seen to correspond with even numbers of sharp signatures upward and flat downward, and odd from $F\sharp$ upward, and $G\flat$ downward. This radiation to even numbers from C and odd from $F\sharp$ or $G\flat$ was evidently the cause of that perplexity.

The keyboard was now looked upon as a picture where all lines were focussed at two centres as points of sight, and you will not be surprised when I tell you that after the day's duties were finished, great pleasure was experienced as I sketched for the first time the designs which are now before you.

That evening, I drew also another diagram, extending radiation to the utmost capacity of the key-board, and also others linked to twelve flat and twelve sharp keys, from which sometimes accidental notation is borrowed by great composers:—



The dotted line conducts the eye to even numbers which radiate from the C centre. The continuous line to odd numbers from $F\sharp$ or $G\flat$. To the right of each centre the

number of semitones correspond to number of sharps to each key signature. To the left, number of semitones correspond to number of flats to each key signature.

The difficulty of applying the reflective principle to the bass and treble staff note-readings still confronted me. I had discovered the two star centres from which key-notes radiated to sharps upward and flats downward, and the question now was, how was all this reflective aspect of the keyboard represented on the book—in other words, how was its notation shown on two staves? was it possible to find sharp signatures reflecting flat? and if so, what about the reflective aspects of the key-notes themselves to which those signatures were attached?

When drawing the following diagram to show a young student how six sharps and six flats were, on the keyboard, one and the same scales, I observed that although $G\sharp$ and $G\flat$ represented the same keyboard digital, yet they occupied two distinct positions on the staves, and THOSE POSITIONS WERE REFLECTIVE:—

Ex. 1

Key-note $G\sharp$

Key-note $F\flat$

that:—

Ex. 2

F

G

The next step was an *easy* one. If this were so with $G\sharp$ and $F\flat$, did *other* key-notes hold corresponding reflectives?

* I ought to have seen (which at that time I did not) that the signs of the G and F flats being *upward* on the second lines of the staves supplied the key to the situation, not only to those notes, but also to the reflective aspects of A and E and H and D .

positions with equal numbers of flat and sharp signatures? and the following diagram showed that they did!—



KEY-NOTES AS PAIRS.

It then came as a revelation how, by taking away all flat and sharp signatures, these key-notes stood before me on the staves in reflective aspects as pairs. Each note was found in company with another which occupied reflective positions everywhere, not only on the staves, but also on ledger lines: whether between the staves or above and below them, every B reflected its position on line or space as D, and D, B; A with E, and E with A; G with F, and F with G. And here was a remarkable feature in the case C not having either sharps or flats in its scale, and therefore without a signature, yet on this account quite independent of two positions; it, therefore, stood alone, without a companion in all reflective positions as monarch of the situation, but as diatonic head and in total sympathy with all other notes.

If science be defined as classified knowledge, then this classification of pairs, B D, A E, G F, may be considered a scientific method for learning the names of the notes, and the pending question before-mentioned—viz., is there no way of classification?—is answered in the affirmative. This, however, is only one point out of many which belong to musical notation.

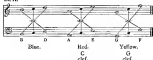
Now the law of association as an aid to memory is very valuable, and therefore it is helpful to study to classify these pairs of notes, B D, A E, G F, by the three primary colours of the rainbow—blue, red, and yellow. These colours are chosen, not in any arbitrary way, but because some hundred years ago they were used as clef signs, and consequently for stave note readings.

On turning over the pages of my notebook, dated July, 1875, written in the committee-room of the Royal Academy of Music when in class for harmony and composition, under the guidance of the late Sir G. A. Macfarren, I find the following: "Mr. Macfarren says that he possesses music to which are attached coloured lines for clefs—Blue for F, and for C, and yellow for G, also that in the first edition of Cramer's *Studies*, published in 1799, there is used the also clef above the bass. Three or four times in the course of a line these clefs would change."

Now from that date to this my impression has been that the first edition of Cramer's *Studies* had coloured lines for clef signs. I remarked it would be difficult to read, to which Sir George replied, "Not when you are used to it."

Now the late Hans von Bülow, in his introduction to "*Cramer's Studies*," expresses regret at not being able to find any information as to when or where the first edition of "*Cramer's Studies*" was published.* It is evident Sir George Macfarren could have supplied an answer—

Ex. 11.



B D are easily remembered by B for Blue.

This diagram shows C as a star-centre and classification of stave notes rotating in pairs. They may also easily be

* It is very likely that Sir George had reference to only a few studies, for the second part appeared in 1812, published by Biersdorf and Hirtel (Bremer's Dictionary, Vol. I, p. 414).

found and remembered by playing the notes in contrary motion from the C, or F and G, as centre.

Ex. 12.

A musical staff in treble clef showing a scale from C to C. The notes are labeled above the staff: C, D, E, F, G, A, B, C. Below the staff, the notes are labeled: C, B, A, G, F, E, D, C. The staff is divided into two sections by a double bar line. The first section contains the notes C, D, E, F, G, A, B, C. The second section contains the notes C, B, A, G, F, E, D, C.

FROM F $\sharp$ OR G $\flat$ SATIATE LEDGER LINES.

When comparing ledger lines either between the staves or below the bass and above the treble, F and G become the chief centres, because these notes in relation from C meet at the fourth, and between the staves at the third ledger lines.

F AND G, CENTRAL, BELOW THE BASS, AND ABOVE THE TREBLE.

Ex. 13.

G Fourth
Ledger Line
above Treble

A musical staff in treble clef showing two notes: G and F. The G note is on a fourth ledger line above the staff, and the F note is on a first ledger line above the staff. Arrows point from the text 'G Fourth Ledger Line above Treble' to the G note and from the text 'F Fourth Ledger Line below Bass' to the F note.

F Fourth
Ledger Line
below Bass.

Ex. 14.

Ledger lines below Bass and above the Treble Stave.

A musical staff in treble clef showing ledger lines below the bass and above the treble stave. The staff is divided into two sections by a double bar line. The first section contains the notes F, G, A, B, C, F. The second section contains the notes C, B, A, G, F. The staff is divided into two sections by a double bar line. The first section contains the notes F, G, A, B, C, F. The second section contains the notes C, B, A, G, F. The staff is divided into two sections by a double bar line. The first section contains the notes F, G, A, B, C, F. The second section contains the notes C, B, A, G, F.

LETTERS UNDER G AND F.

Ex. 13.

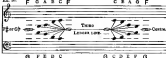
G Tenor
Letters Line
above Bass.



F Tenor
Letters Line
below Treble.

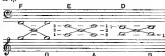
F AND G CENTRAL BETWEEN THE STAFFS.

Ex. 14.



RADIATION FROM C SHOWS LETTERS LINE READINGS OF F G,
A B, AND B D, AT CROSS PURPOSES.

Ex. 15.



Whether, therefore, C or G F be regarded as centres, the same letters are found in reflective radiation, and that is so over the whole notation.

The image displays three musical exercises for the hymn "Father of the Universe." Each exercise consists of a treble staff and a bass staff, with fingerings indicated by numbers 1-5 above or below notes. Vertical dashed lines connect corresponding notes between the two staves.

Exercise 1: Treble staff starts with a C4 (middle C) on the first line. Bass staff starts with a C3 on the first line. The melody in the treble staff is: C4-D4-E4-F4-G4-A4-B4-A4-G4-F4-E4-D4-C4. The bass staff accompaniment is: C3-B2-A2-G2-F2-E2-D2-C2-B2-A2-G2-F2-E2-D2-C2.

Exercise 2: Treble staff starts with a C4 on the first line. Bass staff starts with a C3 on the first line. The melody in the treble staff is: C4-D4-E4-F4-G4-A4-B4-A4-G4-F4-E4-D4-C4. The bass staff accompaniment is: C3-B2-A2-G2-F2-E2-D2-C2-B2-A2-G2-F2-E2-D2-C2.

Exercise 3: Treble staff starts with a C4 on the first line. Bass staff starts with a C3 on the first line. The melody in the treble staff is: C4-D4-E4-F4-G4-A4-B4-A4-G4-F4-E4-D4-C4. The bass staff accompaniment is: C3-B2-A2-G2-F2-E2-D2-C2-B2-A2-G2-F2-E2-D2-C2.

Now what is the practical good of all this? Two facts will illustrate.

One morning, soon after my discovery of the reflective aspects of stave notes, while teaching a young lady to play a composition, her sister, a child between seven and eight years of age, came into the room. I said: "My little friend, do you know your notes on the stave?" She replied: "I know nearly all my treble notes but I cannot learn the bass!" "Well, suppose I show you a way how to learn the bass notes by what you already know of the treble!" "O, thank you," she

said. I spent about a quarter of an hour in showing her the reflective positions of the three pairs of letters, so that if she knew B on the third line in the treble, it was easy to remember D on the third line in the bass, &c. What was the result? The next day I went to the house my young friend said: "Mr. Rhodes, do set me a lot of treble notes. I like to copy them in the bass and say what they are!"

Now children when making a spontaneous remark do so without reserve and generally say all the truth and nothing but the truth, and therefore make good witnesses to the practical utility of a method for instruction which is suited to their capacity.

The other fact is: A gentleman was playing at sight in my own home; he found it necessary to leap to a note under the third ledger line below the bass stave; he remarked: "Pun my word, Mr. Rhodes, I do not know the name of that note!" "Well," I replied, "perhaps you know the name of the note over the third ledger line above the treble stave?" "Oh, yes, it is F there." "Then, according to the reflective principle, what must it be in the bass?" "G," he at once replied, and remarked: "I never saw the advantage of the reflective method before." "Yes," I replied, "you see it is like the multiplication table applied to the staves; for did you ever notice that that table has a reflective side to it? for if you cannot remember how many four times six make, you may find it by remembering how many six times four are." "Oh, yes," he replied, "it is quite a new light over mental notation."

PART II.

If key-notes radiate from two centres, showing sharp signatures upward and flats downward, surely it was natural to suppose that scales would do the same. So drawing scale D with two sharps, and in the bass, B $\flat$ with two flats, and making black notes on the staves to represent black digits on the keyboard, their reflective aspects appeared, so—



But these scales, as you see, do not show black keys reflecting black, but they would do so if we commenced with D for the B $\flat$ scale, and extended the D scale to F $\sharp$, so—

Ex. 21.



But how is this? Why do not sharps and flats on the keyboard answer to each other in reflective aspects, if key notes with equal number of sharp and flat signatures do so on the two staves?

The answer was not difficult to find, because I had discovered years before that D and G♯ or A♭ are the keyboard centres for reflective aspects of its white and black keys; but these are not key-note centres, and why? Because the basis of the construction of the keyboard is the diminished triad. This may be known by considering how this combination, B D F, is found on white keys only; these notes form the crown of the dominant seventh chord and consequently are derived from the uncoupling of harmonic sounds, generated from the dominant root; hence it is clear that the basis of keyboard construction is upon that of natural harmonic law, and it will be shown presently how D and G♯ or A♭ are the centres of key-signature reflections. But the reflective aspect of notation is based upon radiation of key-notes from two other centres as demonstrated in the former part of this lecture. So that, though the scales themselves with equal number of sharp signatures show on the staves their notes in corresponding positions with scales of equal number of flat signatures (because each scale-note name is derived from key-note reflections), yet black keys do not reflect black nor white as all times white, because keyboard centres for reflective aspects of its diatonic are not key-note centres.

To demonstrate. Place a hand-finger on D or G♯ or A♭ (or anywhere) on the keyboard, and play with the right hand in order the seven flat signatures; each flat will be seen in the mirror reflected as a sharp in the order of the seven sharp signatures in the bass staff—

Ex. 22.



Now this keyboard reflection is perfect whether D or A $\sharp$ or G $\sharp$ be considered as centres of key-signature reflection; but the sharps and flats are not in reflective positions on the staves.

KEYBOARD CENTRE THE CAUSE OF ACCIDENTAL NOTATION TO COMMON CENTRE.

Although we have spoken of the keyboard as possessing two centres, the following illustrations show that these centres are repeated at intervals of two octaves.

If a hand-mirror, with its face to the right, be placed upon D, by looking into it when in the treble major and minor thirds are alternately being played, those white or black keys will appear repeating themselves in the bass, hence from them major and minor common chords may be developed in reflective order—

Minor thirds are shown by black notes, major by white.



It may be observed that in this section the minor chords in the treble are composed of intervals within the bass of the bass staff; and the major chords in the bass, of intervals within the bass of the treble staff.



From G $\sharp$ or A $\sharp$ centre flows a double notation of black signals, and double sharps and flats of white. The following shows the reflective aspect of major and minor common chords when the mirror is removed from D to G $\sharp$ or A $\sharp$.

ACCIDENTAL NOTATION TO COMMON CHORDS FROM *A*♭ OR *G*♭ CENTRE.

Ex. 10.
Third section.

A♭ or *G*♭ centre First Minor Third, then Major. *A*♭ *E*♭ *B*♭ *C*♭ *F*♭ *D*♭

Fourth section.

First Major Third, then Minor. *A*♭ *E*♭ *B*♭ *C*♭ *F*♭ *D*♭

Fifth section.

G♭ or *A*♭ centre First Minor Third, then Major. *G*♭ *D*♭ *A*♭ *E*♭ *B*♭ *F*♭

Sixth section.

First Major Third, then Minor. *G*♭ *D*♭ *A*♭ *E*♭ *B*♭ *F*♭

See 4, Double Flat

The first chords of the last section introduce *C*♯ and *E*♯ as new names of *D*♯—our first and now familiar keyboard

centres. If from this centre, with its new names, we reflect the whole keys of the first section, key chords are found which complete the second key circle, and also F# and G# as the perpendicular chords of limited notation.

Double flats or sharps generated from Bb or C# are chiefly found amongst chromatic harmonies. The F# and G# as *key notes* are not, to the writer's knowledge, found in any work. But F# is the dominant note of Bb, or twelve sharp key; and G# is the subdominant of Bb,* and therefore these come within the radius of keys from which composers borrow notation.

In the following study of key chords, the bass (as in above examples) descends first to minor and then major intervals of thirds. Major thirds represent major key-notes; minor thirds, their relative minor key-notes. In the treble, the alteration from chord to chord is only a single note, and its progression is to the same root note to which the bass moves.

No. 1.—SEVEN OF KEY CHORDS.*

Ex. 45. Bars 1 2 3 4

5 6 7 8

9 10 11 12

Harmonic digress with 1b, 4b and 5b keys.

13 14 15 16

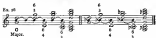
Thematic digress with 5b, 4b, and 3b keys

* Bachoven, Mass in G, p. 200 (Ten, Sordani)



THE REFLECTIVE ASPECT OF COMMON CHORDS.

The central note, or third of a common chord, is, when in close form, the pivot of its inversions.



The interval of the perfect fourth is everywhere conspicuous in the inversions of a common chord. The student may claim the highest note of this interval as the root. Its reflective aspect on the keyboard, from the two centres, may be viewed in symmetrical order thus:—

G $\frac{7}{4}$ or A $\frac{7}{2}$ CENTRE.



D CENTRE.



* A young student will find valuable aid in knowledge of inversions of common chords, if on the keyboard he plays first these fourths, and then adds major or minor thirds above or below* at the same time naming them first in actual inversions as the same may be, together with the root then.



Second inversion of B $\frac{7}{9}$ major and first inversion of G major.

Now it matters not whether the treble staff chords in Study I, commence with a first or second inversion, for the same rule applies—*viz.*, that the alteration of a single note from chord to chord is to the same named note as that to which the bass moves.

Ex. 29.
Treble ⁵ Closed

C A F C A F

Of course these limited examples need not be regarded as *key* chords, their progression equally applies to single keys. The first three chords of Example 29 begin Luther's song - "Worms."

Ex. 30.

G A F

The second three are in our National Anthem.

Ex. 31.

C A F B

It requires DOMINANT HARMONIES to determine *key* chords.

KEY CHORDS FOLLOWED BY THEIR DOMINANT CHORDS.

The simplest progression is to follow the key chords of *Steady 1*, by their dominant common chord three —

Ex. 34.

Ex. 34 shows a musical progression on a grand staff. The top staff contains five chords: C major, A minor, F major, D minor, and B-flat major. The bottom staff contains five chords: G major, E minor, C major, B-flat major, and F major. Below the bottom staff, the chords are labeled: C dom. (maj), A min., F dom. (maj), D min., and B-flat dom. (maj).

"ST. STEADY" (Third strain).

Ex. 35.

Ex. 35 shows a musical progression on a grand staff. The top staff contains five chords: C major, A minor, F major, D minor, and B-flat major. The bottom staff contains five chords: G major, E minor, C major, B-flat major, and F major. Below the bottom staff, the chords are labeled: C dom. (maj), A min., F dom. (maj), D min., and B-flat dom. (maj).

THEIR CONTRAST MOTION.

The reflective aspect of the above progression is found when the dominant chord precedes the key chord.

Ex. 36.

Ex. 36 shows a musical progression on a grand staff. The top staff contains five chords: G major, E minor, C major, B-flat major, and F major. The bottom staff contains five chords: D minor, B-flat major, F major, C major, and A minor. Below the bottom staff, the chords are labeled: G dom. (maj), E min., C dom. (maj), B-flat min., and D dom. (maj).

"Oxberley," L. M., third strain, is a case in point.

Ex. 37.

Ex. 37 shows a musical progression on a grand staff. The top staff contains five chords: G major, E minor, C major, B-flat major, and F major. The bottom staff contains five chords: D minor, B-flat major, F major, C major, and A minor. Below the bottom staff, the chords are labeled: G dom. (maj), E min., C dom. (maj), B-flat min., and D dom. (maj).

My purpose in the following illustrations is to show that the great masters, whether consciously or unconsciously, were often guided in their choice of keys and harmonic progressions by this principle or law of reflection. If consciously, it would be interesting and instructive to know if any record or intuition has been left of their having been guided when composing by such a principle, for it is certain their works reveal it. If they follow unconsciously such a law, it is the more remarkable, for it shows an unwritten law "written on their hearts," and in this light the result of my endeavours is but the discovery and giving expression in words of such a law, and thereby rendering it accessible as an important basis for study, which cannot but be regarded as worthy of careful consideration by all professors and students of musical composition.

The following selections from Schumann, Beethoven, and Mendelssohn will be sufficient to testify to the effect, conscious or unconscious, which this principle has had on the modulations in their compositions.

SCHUMANN'S A MINOR CONCERTO (Op. 54)

(Fourteenth score)

Ex. 36.

C maj A min F maj E, Dom. of key C.

These key chords (C major, A minor, F major) are the first three of Study I. By contrary motion (from the end of the study) they are C, E minor, G major, and this reflective aspect is found in the sixth and seventh scores of the same Concerto thus:—

Ex. 37.

C maj in dom. E min in dom. G maj in dom. C

REFLECTIVE ASPECTS OF MODULATIONS IN BEETHOVEN'S
SONATAS.

Key chords of third and fourth bars of Study I., preceded by their dominant harmonies, are found in the sixth score of Beethoven's Sonata in E flat (No. 9) —

Ex. 28.

The keys G, E♭, C, of bars 3, 4, 5,* are found in contrary or reflective order in the Rondo of "Sonata Pathétique."

Ex. 29.

* Appoggiatura and passing notes are omitted in order that the key chords may be more readily discerned and compared with example 25, bar 4. Also example 29, bar 4, compared with bars 25 and 26, shows Beethoven's ascent from C minor to E♭ major; and Schumann's, from C major to E minor.

ANOTHER EXAMPLE OF THE SAME RELATION OF KEYS AS IN STUDY I.

Also key chords of fifth and sixth bars of Study I. are comprised within bars thirty-two to forty-first of Sonata in C minor (No. 9).

Ex. 25.



For purposes of study the above progressions of keys and their reflective aspects or contrary progressions to major and minor keys may be regarded as pairs. But a second progression is often found and in contrary modulations thus, say from G major to its relative E minor, then to D major and its relative B minor; A major and its relative to $F\sharp$ minor, thence to E major. Reflectively E major, $F\sharp$ minor to A major, B minor to D major, &c. These reflective aspects may be considered as a second pair.

Beethoven's first movement of his Symphony in D affords an illustration of the first progression of this second pair of minor thirds and major seconds. So :—

Ex. 26.





Again, this progression is followed from the opening of the dominant subject: A major, F# minor, and E major.



We have find Beethoven descending through sharp keys, the signatures of which increase from G, one sharp, to E, four sharps. But in Mendelssohn's "Spring Song" (*Lied*, No. 30, 5th score), we find this order in reflective aspect. Beginning with E (four sharps) he passes on to F# minor, A major, B minor, and D major. Mendelssohn, in contrary motion to Beethoven, ascending, sharp signatures decrease from four of key E to two of key D; as—

MENDELSSOHN'S "SPRING SONG" (*Lied*, No. 30)

No. 30.

E maj. maj. and to F# min. min. and to A maj.

A maj. maj. and to B min. min. and to D maj.

These examples of the respective aspect of key progressions in pairs, suggest how the perplexing art of modulation may be classified and intelligently studied in set grooves; and thereby that power over key relationship be developed, for which the great masters have ever been remarkable in their extempore or "cadenzas" performances.

In conclusion, Sir John Stainer said, at the 14th annual Conference of the Incorporated Society of Musicians, held in Dublin, January 1, 1893, that—"The musician can no longer remain a mere clerical craftsman. He must explore all the by paths on either side of his course; and what was still more important, he must realize the fact that all this tramping had for its sole object the better appreciation in himself and the better interpretation for others of the beauty, the

idealism, and the emotional expression of the creative genius of the composer. This outward of intellectual life compelled modern musicians to strive to keep up to date in all that concerned their art and its exposition.*

Now it is obvious that this lecture is on the lines of Sir John Stainer's clever statements, for though my endeavour has been to search for reasons for the perplexing difficulties of musical notation, yet inevitably it led me "to explore the by paths on either side of the course," which also led to the discovery of a reflective principle, which has been a beaming and guiding light, showing both sides of the way: sharps on one side and flats on the other. It has also shown the musician's pathway of thought lying between, as we have seen demonstrated by examples from the works of the great masters.*

DISCUSSION.

THE CHAIRMAN.—We have all been delighted with the interesting and admirable paper just read. I confess I came here knowing nothing about the subject, and I would even go farther than that and say that I knew nothing about the construction of notation before. I had come to the conclusion that the musical staff had been built up by degrees, just as people required a little more help, that it began in a sort of haphazard way, and each man and generation added something to it, in order to make it a little more useful, as time went on. I think Mr. Rhodes has discovered for us a very splendid defence for our system of notation. I had not the least idea that we could bring science to show how admirably it has been constructed—in fact, this revelation to us would rather suggest that the formation of our notation and scale was an inspiration. After the splendid exhibition we have had—so simple to all conversant with music—of our old notation, which we have, since it gives us the chance of all the past ages, in future we shall not lose any new notation that may be brought forward with the idea of superseding the admirable system universally adopted. I am sure you will accord to Mr. Rhodes a sincere vote of thanks for the paper he has given us.

The vote was passed unanimously.

* The above exposition of the principle of reflection applied to the keyboard and the staff is part of a copyrighted work now in the press, entitled "Curriculum of the Keyboard and the Staff," portions of which will be sent by the Author, "Argus" 32, Leicester Road, Division Hill, S.W., on receipt of an addressed post-card. Publisher: Kegan, Paul, Trench, & Co., Ltd.

Mr. AUGUST TAUBERT remarked that he had given this matter some attention eight or nine years ago, and quoted instances of mechanical agreement, by inversions, of scales, in thirds and sixths:—



He also introduced the following examples of mechanical inversion—



Mr. TRICKEN then produced a book of exercises by Henselt (written in all probability forty or fifty years ago) constructed in accordance with this principle of overtones, and expressed his conviction that the fringe only of an important feature was being touched upon.

Mr. SOUVERBAIN.—I do not rise to criticise or offer an opinion upon the interesting lecture we have had, but to make one remark upon a statement which the lecturer made. He spoke of our notation as having been used by every nation under the sun since the eleventh century. [Mr. RABAN: Every civilized nation.] I accept the correction, but do not think you said so. I only just point out that it is hardly correct. We ourselves were not using that notation in its entirety at that period, while at the present time there are other systems of notation. We must also remember that the tablature of the lute was employed until within a few hundred years ago, and that a form of this tablature was used for the lute and the harp, rather than the employment of lines and spaces. And then, till a very late period indeed, the letter notation was used in Germany. I know that our Chairman has a remarkable book, which, I think, is dated 1601; it contains a large number of mones, arifphone, and pieces of that sort, all the parts being in the letter notation, some of them in as many as eight parts. This shows that the staff notation did not prevail, even in Europe, till much later than the period he said. May I mention, with regard to the question of colouring, that of course we have plenty of examples with the lines on which the C and F clefs stood coloured yellow and red, which enabled the eye to pick them out.

The CHAIRMAN.—This is supposed to have been invented in the eleventh century, but Grove's Dictionary tells us that in the Bodleian Library there is a prayer of earlier date, with music on the stave, but, no doubt, this is an error.

Mr. SOUVERBAIN.—Will you allow me to say I have seen that book, and there has been much discussion on it. Sir George Grove and those who advised him were mistaken. It occurs in the Westminster "Troparium" and that was written, no doubt, in the ninth century; and in that is found a prayer for King Ethelred on lines and spaces; the theory is that it could not have been written after his death, and must have been written in his lifetime. But it is conclusively proved that a later hand put that piece in the book; indeed, if you look underneath the present text you can see the original writing which was there before.

The CHAIRMAN.—We are glad to have had this discussion and are obliged to Mr. Tricken for his remarks; it is interesting to find that the matter has been in the minds of two men, who have worked independently of each other.

Mr. BARNES.—I am very much obliged for the manifest interest you have shown in the subject. I may say that on these lines of reflective aspects of notation there are whole regions which I have explored, but obviously time would not allow of their being mentioned. For example, in the region of reflective aspects of notes on single staves, we may observe that the alto staff, having C on its central line, the other six letters reflect in pairs at equal intervals above and below it, precisely as they do on the two staves. Also there are regions of harmonies the reflective aspects of which Mr. Trickett has given such happy illustrations, and which he says he observed nine years ago. I am much obliged to him for bringing them forward. But his remarks only touch upon the latter portion of my lecture—i.e., the reflective aspect of chords when played on the keyboard, and shown on my diagrams, from D to G $\sharp$ or A $\flat$ centres. May I ask Mr. Trickett whether he has seen the reflective aspect of numbers which radiate from C and F $\sharp$ or G $\flat$ in numerous numbers, corresponding to numbers of sharps and flats in such reflective key signature? or the reflective aspect of these notes on two staves?

Mr. TRICKETT.—Not as regards the staves.

Mr. BARNES.—It is here that the discovery is so new. I was not aware that on this theme anyone had traversed in any direction the same ground as myself, and it appears that Mr. Trickett's thoughts and illustrations have had reference only to keyboard reflections. I am sure you will heartily join with me in a vote of thanks to our worthy Chairman, who has so ably and kindly conducted the meeting. For myself, I feel it to have been a great honour to have had him in the chair on this occasion.

RECEIVED 12, 1895

W. H. CUMMINGS, Esq., Vice-President,
IN THE CHAIR.

*A FEW WORDS ON THE SUCCESSIVE EDITIONS
OF BEETHOVEN'S NINTH SYMPHONY.*

By Sir GEORGE GRAY, C.B., D.C.L., &c.

My remarks this evening are not to be taken as those of a musician, to which character I cannot pretend. I simply desire to call your attention to a matter of fact—to the alterations which have been made in the score of the Ninth Symphony in the successive publications of the last thirty years.

The original editions of all the Symphonies were issued with Beethoven's own approval; and, "errors excepted," are to be taken as correct. In one case, that of the redundant bars in the *Solerte* of the C minor, he wrote to the publishers shortly after the publication, correcting the mistake; but, for some reason, his letter was not acted upon, and indeed seems not to have been noticed till more than thirty years later, when the mistake was otherwise discovered. However, I do not wish to go into this. I will confine myself now, not to weary you, to one or two instances of alterations made, without Beethoven's knowledge and consent—indeed, since his death—in his Ninth Symphony.

The Ninth Symphony was first performed (in M.S.) at Vienna, on May 7, 1824; the second performance being that of our own Philharmonic Society, March 11, 1825. The score of the work was published by Schott and Sons, in the well-known fifth edition, at the end of 1826, or beginning of 1827. This is numbered 222, the parts being 221. That

2

Beethoven are the proofs of this edition is evident from references to them in his letters to the publishers before publication. The edition must therefore be accepted as so far having had his approval, except in the case of one or two additional indications which he requested should be made but which were not accepted. These I will notice later. In 1889 a new edition of octavo size was published by the same house of Schott and Sons; and then, as I learn from headquarters, the plates of the folio were melted down. It would seem that this octavo edition was intended to be in all respects, except its size, a fac-simile of the folio. It is numbered with the same stock number, 2323, as the folio; and the title-page contains the same words, with the addition of the branches of the firm which had come into existence since 1826. In the body of the work, however, there is more than one important difference.

1. At page 58 of the first folio, in the *Scherzo*, where the time changes so four crotchets in a bar, there is engraved above the score *Presto*, $\text{♩} = 126$, which agrees exactly with the list of metronome marks in Beethoven's two letters to Schott and to Moscheles. The former letter is given in Kold's Collection of Beethoven's Letters (ii. p. 221), the latter in Moscheles's version of Schindler's Biography of Beethoven (ii. 71). The original of the latter was exhibited in the Loan Collection at the Albert Hall in 1885. In the octavo, however, a serious alteration has been made at this place; the *ritard* has been changed into a *sempre vivo*, that is, exactly doubling the speed! The metronome mark above the score now stands thus, *Presto*, $\text{♩} = 126$. True, the tail of the *ritard* in the folio is very faint, but the rest of the note is unquestionably a *ritard*, and not a *sempre vivo*; and also the direction is repeated—engraved below the score as well as above it; and there the tail is perfectly distinct. In the octavo, however, the metronome mark has been omitted below the score, and the word *Presto* alone given. This, then, is one instance of a serious change made in the reprint (a reprint by the original publishers, mark you!) and which involves a word of comment or warning.

2. I now pass to another instance of a different nature, which, though making no change in the music, sets at naught a very characteristic and individual act of Beethoven's. At page 107 of the first folio, in the first bar of the page, twelve bars before the beginning of the famous cadence for the solo voices, at the words "Was die Mode among gothais," Beethoven, excited with the subject, and in doing his usual love of plain-speaking, has changed Schiller's word *stark* or "strictly," into *frech* or "insolently"—namely, from "that which fashion strictly parts" into "that which fashion

ready parts." Surely so characteristic and personal a touch of the great composer's might have been suffered to remain! But not in the octave, and in subsequent editions, the word *strong* has been restored, and here again without a word to show that any alteration has been made. Had Beethoven been a second-rate composer, we might have challenged his changing a word in his text; but Beethoven was not second-rate. He was first-rate. He held the same rank in music as Schiller in poetry, if not a higher rank. He had been thirty-five years before the world, and was acknowledged by all as the greatest composer of his day. But we need not argue thus. The alteration was Beethoven's own, and ought to stand; though it should be accompanied by a note. His shoulders are quite broad enough to bear the responsibility. How different, how far inferior, are the methods of music publishers in this case to those of the editors and publishers of books! I won't speak of such an edition as the Cambridge Shakespeare, in which all the various editions are collated and balanced with the most pains; nor of the pains which are being taken to give the public the exact contents of Poppo's *Memora*. I will mention a book which I often read, the "*Mémoires of the Duc de St. Simon*," of the reign of Louis XIV. (Paris: Hachette, 1873-77), printed from the original MS. St. Simon, though a man of enormous ability, writing at a time (say 1700) when spelling and grammar were not so rigidly fixed as they now are, occasionally made faults both in grammar and in spelling. These are all corrected in the text, but the original reading is carefully given at the foot of the page. If therefore any reader thinks St. Simon's style characteristic or interesting, he can see them there exactly for himself. I confess that that seems to me the proper method of editing a classic.

3. While we are at this place in the *Fine*, I should like to mention that the double bar, which in the first folio Beethoven has placed at the change of the signature to five sharps (p. 200), is in the octave introduced four bars earlier—a slight matter, no doubt, but one which, I submit, should have been either let alone or called specific attention to.

4. There is one more matter that I must notice. Beethoven, as is known, was a tyrant over his copyists. He would have his slightest directions as to phrasing, bowing, *pizz* and *stacc*, *sfz*, exact place and duration of *armonici*, &c., strictly followed. Several of his letters on this subject have fortunately been preserved, and they are full of amusement and instruction (p.g., Noll, i., 309; &c., &c.). He knew exactly what he meant, and his intention was that the public should know it too. It is quite touching in his autograph notes to

see the care which he takes about such things; writing in the indications at each line, all down the page, and in specially clear letters. One of the things which he chiefly insisted on was the difference between dashes (*Striche*) and dots (*Punkte*) above notes. In a letter to the copyist he says (*Nohl*, i., 310f): "When I put a dot above a note you must not put a dash, or the reverse. Dashes and dots are not the same thing." In the Seventh Symphony, all through the *Allegretto*, he corrected the copyist, who had used only dots, by marking the second and third notes of the chief phrase with dashes, the fourth and fifth with dots, and so on. And this he has most emphatically marked in the autograph preserved in the Mendelssohn House at Berlin. In the Ninth Symphony he has not altered his mind on this special point, as almost any page of the first folio will show, and it is therefore more than strange to find in Schott's octavo one constant level of dots!

And there is another thing yet to mention—namely, that the octavo has been followed, as far as I can see, in these changes—in every one of them—by the great folio edition of Breitkopf and Härtel, which bears on its front the words "Critically correct edition," and that in this matter of dots and dashes the same alteration has been made all through the other eight Symphonies; and so that edition has acquired a large amount of authority in the musical world very much undesired must be done by its incorrectness.

5. So far I have mentioned the treatment with which Beethoven has met since his death. But I am afraid that a similar spirit manifested itself even during his life. Not to wander out of the Ninth Symphony, I can quote a touching instance of the indifference shown to his strongest injunctions. Our feeling towards him is one of such utter veneration, such an unqualified desire to do anything he asked—if he could fortunately be here to ask us!—that it is hard to suppose that he could ever have made any request without its being at once obeyed! But I fear it was not so during his life. The matter is this. In the first folio the *Scherzo* of the Ninth Symphony is, according to the usual custom, only printed once, with a mark of *Da Capo* after the Trio—or rather there should have been such a mark. But when the proofs came into his hands he at once detected its absence (see page 75). He therefore at once writes to the publisher, on September 20, 1806, fully three months before the publication (*Nohl*, ii., 290), calling attention to the fact. The request was, however, evidently not attended to, for on January 25, 1807, he again writes reiterating his wish in more detail (*Nohl*, ii., 297). This too was neglected, since there is no direction at all in the original folio score! (p. 75).

It is of no consequence now, as in the octavo the *Scherzo* is reprinted at length, as well as in the second folio—that of Beckkopf and Hartel, but the incident touched me, and I could not help mentioning it.

I have now finished my remarks, which, I hope, have been as interesting to you to hear as they have been to me to make. You will perhaps expect me to wind up with a Resolution, or in some other way to bring the matter to a point. But I prefer to ask the distinguished musicians present to state their views on the subject, and then we can let the matter *dragen* for a while.

What I myself should like to see would be an edition of these great works as Beethoven left them. Let apparent errors or omissions—such as that in the No. 7 Symphony, which Mr. Silas brought forward last year, or that in the first movement of the Pastoral Symphony, which Robert Schumann detected—let these be set out in foot-notes, or some other form, which should make evident what the circumstances were. And when alterations have been made on Beethoven's own authority, such as the two redundant bars in the *Scherzo* of the C minor Symphony, let there be a note also. But let us keep clear of the "curse of emendation."

One rather occurs to me as I correct my proof—the dedications of his works, and the remarks which he occasionally prefixed to the first editions. Those who are intimate with the literary details of Beethoven's music tell us that the personages to whom he dedicated his pieces were always interesting or remarkable, and therefore they surely might be named at the head of the page, especially as that would only be following his own first edition. As to the prefaces, surely so interesting a note as that given in the original edition of the three String Trios (Op. 9) should not be suppressed.

Beethoven was so extraordinarily careful—so fastidious—in all matters relating to his art that this is due to him. If a conductor should say, "I cannot make a difference of execution between dashes and dots," be it so; but give us the power of seeing, by looking at the printed score, that the difference was intended by the composer.

Above all, let us hope that so vital a difference as that of $\text{♩} = 116$ and $\text{♩} = 115$, in the Trio of the Ninth Symphony, will be corrected at once, and our excellent horn-players saved from the scramble which they have too often lately been forced to make of the passage. I make no accusations against any one, but I think I have given facts to show you that the existing modern editions of Beethoven's Symphonies are not satisfactory. The new edition of Schubert's Songs,

edited by Mr. Mandysenwshi, of Vienna, for Messrs. Breitkopf and Härtel, and now in course of publication, shows how perfectly such a thing can be carried out.

I am very much obliged to you for the patience with which you have listened to me, and I hope to hear many useful remarks from you.

DISCUSSION.

THE CHAIRMAN.—We are very much indebted to Sir George Grove for the very interesting paper he has read to us. It is really a serious matter, as he has shown us, and I have no doubt we shall get some valuable opinions upon the subject he has so ably discussed upon. It seems to me that he is perfectly right that we should know what Beethoven himself did write, and perhaps the best way of ascertaining that would be to carry out a scheme which Sir George himself suggested, that the original manuscripts should be published in fac-simile. I was in my name as a subscriber for the proposed fac-simile, and I had hoped that by this time I should have had an instalment. Every student would then be able to see for himself what Beethoven wrote. I do not quite feel so irritated as Sir George over the double bar matter. Of course there should be, as he says, a note that Beethoven had the double bar four bars later, and there is not the least doubt that whenever the author has presumably been imposed upon (a very doubtful matter), the editor should let us know this, so that we could think about it for ourselves. My first duty is to ask you to give a hearty vote of thanks to Sir George for his admirable paper. (The vote was passed unanimously.)

MR. GELLESCHWERT.—I think our Chairman has much better right than myself to order to the copy in possession of the Philharmonic Society, not only because he has been so long connected with that Society, but also because he does so much for it. I shall confine my remarks to the Ninth Symphony, to which Sir George Grove has referred. I have seen the original autograph of this work in Berlin, but have not studied it; the Philharmonic Society's copy, however, I have studied, and more particularly lately, by Sir George's wish, and I consider it to be a most remarkable copy. It came, as I understood, into the Society's possession within a year of its first performance at Vienna, which took place in March, 1804, while it was first played in London in May,

ring. Our copy seems to me, for various reasons, to be most authentic. Firstly: All the marks to which our lecturer has referred are contained in it, and are inserted against almost every staff, either below or above. The marks of expression are not shown merely at the head of certain portions of the score, such as wood-wind, brass, voices, or strings, but they are put into every line. Further: Beethoven himself has marked every movement of the Symphony. He has marked in his own writing the different movements, as "*Erster Satz*," "*Zweiter Satz*," &c., and the triple-pipe, also in his writing. I need not tell those acquainted with Beethoven's writing that it is rather illegible; yet as these four entries are written by him and are in German characters, this fact of itself gives to the score an authenticity which I should say no other score, except the autograph, could lay claim to. Moreover, he evidently has himself overhauled the entire score. It, however, must have presented one great difficulty to the conductors of that period, which finds its literal expression in the score itself. This difficulty occurs in the last movement, the words of which are entirely written in German character and in rather a cabbled hand, and in those days, I imagine, the German language was not as much cultivated here as it is now. Indeed, an English translation is attached to it.

Sir GEORGE GROVE.—At the first Philharmonic performance it was sung in Italian.

Mr. GOSCHENOW.—Doubtless our Philharmonic score has been severely handled, apart from these doggerel translations. It contains, in various handwritings, black double-bars, red marks, and all sorts of inscriptions. In the Scherzo movement referred to by Sir George there is an instruction in strange Italian, written by the Vienna copyist, regarding the return to the beginning of the movement (Philharmonic Score, p. 121). I had better read Signor Visetti's translation of what he terms "*pigeon*" Italian. "At the repetition of the minor after the major, one begins from B and takes the last time the second part, and after this pause the Coda." Thus there is the mark referred to by Sir George, which is not found in the Philharmonic score, while the Italian instruction just mentioned has remained standing, and, in addition, all kinds of trivial marks inserted from time to time by the various conductors. In conclusion, I should like to mention that I have had the good fortune to meet the famous Austrian singer, Madame Unger-Schubert, who sang the soprano part at the first performance at Vienna, and who died at Florence in 1877. She spoke to me of that event with enthusiasm, and mentioned with great emotion how Beethoven, owing to his deafness, did not hear the plaudits of the audience, so that she had to assist in

turning him round to bow his acknowledgments. This incident is, I think, mentioned in Grove's "Dictionary of Music."

Sir GEORGE GROVE.—I sat by her side in the gallery of the Crystal Palace, and she told me the same story.

Dr. VINCOW.—In the edition which I have here—it is the first edition—there is no autographic mark at all on page 66.

Sir GEORGE.—It must be an older impression. This is very curious. Beethoven must have put in the autographic mark afterwards.

Mr. HOWARD.—Do the Philharmonic records show that the Symphony was done in Italian and not in English?

The CHAIRMAN.—I have been looking through the early records of the Philharmonic Society, but have not traced any reference in the letters or minutes to the words,* but they were sung in Italian, I am quite prepared to believe, for I find that although they are not written everywhere in the score, they are occasionally written in pencil. Undoubtedly in 1825 there were not many people in London who knew much German. The words were not printed in the programme books. Mr. Goldschmidt has spoken about that score which we treasure so much. It is most interesting, for many marks are in Beethoven's own handwriting. True, it is in a cover which is not handsome, but I am such a thorough antiquary that I would never like to take away any bit of history from it by putting on another cover. Even the various remarks that have been put in by Costa and other conductors to guide them I would not rub out. I hope this score will not be tampered with in any way, except to have a handsome case made for it—gold would not be too good—but I would not take away one iota from leaf or cover.

Sir GEORGE GROVE.—I started some time ago about getting the autographs photographed. Unfortunately, I have not been able to get Brinkopf and Hartel to advance in it. They authorized me to make a public statement, and get the Queen and the Prince of Wales's subscriptions, and then they dropped it, owing, I apprehend, to difficulties in obtaining the loan of the autographs and in the then imperfect state of the photographic process. Of course, the autographs are not always the best copies that were made. Beethoven's own autographs were copied by copyists, and altered by him again. One of the most interesting autographs I ever saw is the manuscript of the Seventh Symphony, which is in Berlin in the Mendelssohn house. When Mendelssohn was a young man, he called on André the publisher, and began playing this Symphony from memory. André said: "I cannot understand that Symphony, because I saw the manner in which it

* Since the date of this Meeting I have discovered that the words were translated, for the Society, into Italian, by Sigor Pagliardini.

was composed. Beethoven would leave a gap of two pages or so, and then go on afterwards, and afterwards fill the others up. I never can believe it was done that way." Beethoven's autograph of Symphony No. 9, in Mendelssohn's own house at Berlin, shows that very thing in it all through—here a blank page, two there, and so on. If that were photographed it would be enormously interesting, but I do not think it would bear very much on the early state of the text. Still, I wish we had all these things. I can only say I have been very much obliged to you for the way in which you have listened to me.

Mr. Edwards.—There is no first edition in the British Museum of the Ninth Symphony.

Mr. Stenhouse.—You referred to the two redundant bars in that Canon Symphony. The printed letter of Beethoven, and the opinion expressed by Mendelssohn, I believe, do not entirely set the matter at rest.

Sir GEORGE GROVE.—No. Mendelssohn convinced himself by his own instinct that these two bars were redundant.

Mr. Stenhouse.—Yes, but the matter was not quite settled.

Sir GEORGE GROVE.—No, it was not. Schindler was still strong in favour of the redundant bars, and so was Berlioz.

Mr. Stenhouse.—But did not the uncertainty arise from the fact that these were hand parts which Beethoven had himself corrected in which the two redundant bars were left?

Sir GEORGE GROVE.—I do not know, but Schindler says he had heard the Symphony played in Beethoven's presence with the two redundant bars.

The CHAIRMAN.—Don't you think, Sir George, that as Beethoven did not very often send his score to the copyists, but used to send his parts, and copyists had to make score from parts, that was very likely how the redundant parts went in, as he did not send his score to the copyists?

Mr. Edwards.—Beethoven was subject to the tinkering of publishers. In his lifetime his publishers went and put other words. I don't know whether that was the first edition or not. We have not a copy in the British Museum. Unfortunately, many of these first editions are not accessible. People despise them, but they are most valuable. I have been trying to see a first edition in German of Mendelssohn's organ fugues. I happened to see one, and it is most interesting to find that on the dedication page is written, "To Thomas Attwood with reverence and gratitude," which is not printed in the English edition or modern reprints.

Sir GEORGE GROVE.—Beethoven had certainly plenty of trouble with his publishers. There is one letter in which, referring to the three Sonatas in G, D minor, and E flat (Op. 31), he says that he is quite bored with stamping and swearing over the proofs. Writing to Hoffmann in 1808,

about the proofs of the six quartets (Op. 95), he uses these words: "Herr — has just published my quartets, perfectly full of blunders and errors: they swim like fish in the sea. I declare my skin is literally full of the stabs and scratches of this dreadful edition."

Mr. GOUNDROUT.—I had the good fortune to collate all Mozart's autographs in England (except the quartets) for the Breitkopf and Hartel Centenary Edition, and in one of the four-hand sonatas I feel certain I found not less than one mistake and correction in the current editions.

Mr. GOUNDROUT.—At the Inaugural Meeting of the Session, Sir John Stainer, our President, put questions to me (a reference to the chorales introduced by Mendelssohn in his Organ Sonata, which I could not answer on the spot of the moment, certainly not correctly, but which, by leave of our Chairman, I should like to do to-day; for, since that time, I have had on loan, from Mr. Arthur O'Leary, the autograph of the sonata, and have examined the chorales regarding which our President did me the honour to question me. I have carefully compared the printed "Peters'" copy now in use with the original autographs of Mendelssohn,—all throughout in his writing except the third sonata.

This is in a copyist's writing, but marked by Mendelssohn himself (just as the Ninth Symphony, owned by the Philharmonic Society, was, I think, overhauled by Beethoven). The Sonata contains six bars of Mendelssohn's own writing. I am bound to say that the printed "Peters'" edition is not in accordance with the autograph. Regarding the chorales introduced, I find there are four embodied in the six sonatas. In the first sonata, in F minor, Mendelssohn himself has given in the autograph the name of the chorale, which for some reason the publisher has omitted. Mendelssohn gives the chorale as "Was mein Gott will" ("What God ordains," &c.). I have looked it up and find it dating from the sixteenth century. Originally a French song, it was adopted by the German Church. It is an eight-lined tune, and as such has been used in its entirety by Sebastian Bach seven times (viz., in six cantatas and once in the "St. Matthew Passion"). Mendelssohn, however, has omitted here the first four bars only. The second sonata has no chorale, the third contains the pathetic "Am teufel Reih" and is used here by Mendelssohn in its original form. It was published in the first hymn book of the Reformation, in Luther's time (1524). The fifth sonata contains a tune on which, regarding its origin, Sir John Stainer had particular stress and which,

so far, I have in vain tried to trace. It is free-lined, a metre not often met with in German hymnody, and my own impression is that it is Mendelssohn's own composition.

In the sixth sonata, in D minor, Mendelssohn has used the famous six-lined chorale, "Our Father, which art in Heaven," which was first published in 1542, and is, I think, justly ascribed to Luther. Bach has used it a good deal, and Mendelssohn has introduced it here into every one of the six movements of the sonata excepting the *Presto* in D major. He has retained its pure original form and has worked it out with such marvellous resources of contrapuntal and artistic skill, that the sonata leaves on one's mind the impression of having been one of his latest compositions for the organ, and, if I may be allowed to express an opinion, as being more like the greatest works of Sebastian Bach than anything else from his pen.

MARCH 12, 1899.

SIR JOHN STAINER, M.A., MUS. DOCT., OXON., PRESIDENT,
IN THE CHAIR.

*ON SOME CAUSES OF THE CHANGES OF TONE-
COLOUR PROCEEDING IN THE MOST
MODERN ORCHESTRA.*

By CHARLES MACLEAN, M.A., MUS. DOCT., OXON.

THE limits of a paper such as the present are too confined, and perhaps the subject itself is too impalpable, to afford any hope that all the causes in the case mentioned in the title can be here set out in one view; the paper is therefore designated as only illustrating some causes. The term "tone-colour" has come to this country translated from the German; it is a word involving a metaphor, and it is just possible that twenty-five years ago it might have been resisted by some as an affectation; but it is an accepted term of the enlarged musical diction of the present day. It conveniently expresses that total effect made on the ear by musical sounds, especially the collective sounds of the orchestra, which is dependent not on *art* structure proper but on the qualities and employment of the instruments which give interpretation to the *art*-idea. In a concert-room of to-day, an orchestra constituted as one to perform a Handel score, and one constituted as one to perform a Wagner score, differ entirely in tone-colour. Even where the constitution of the orchestra is the same, as say in performing works by Mendelssohn and Schumann respectively, the tone-colour is different, because those two composers used the instruments differently. By the most modern orchestra in my title I mean that of a period not exceeding say the last fifty years, or the lifetime of many in this room, and in some particulars the remarks will have reference to

the orchestra actually of the present day; many most able writers have treated of the historic growth of the orchestra, and the present paper is not to be regarded as historical in its aim except in the sense of drawing attention to some facts connected with the most recent developments.

Regarding the changes in point here I do not know whether an objection may be raised at the outset, by the expression of a doubt whether there are any recent changes to record. A statement is not unfrequently made in didactic works on music, that the orchestra of to-day is substantially the orchestra of the beginning of the century, or words to that effect. But I would reply to any such doubt, that though statements like that last mentioned may be correct in the context in which they appear, and though it is perhaps in dealing with the student more important to dwell on what remains permanent in orchestral work than to dwell on what exhibits a tendency to change, yet there have also been vast changes in recent times, which will naturally be considered by a body such as I am addressing. It will not invalidate my remarks if it be found that for many facts cited as belonging to recent times a parallel can be quoted as existing in older masters. A diligent searching of scores will always reveal a great number of such instances where a general tendency subsequently developed is forestalled by a partial instance or an isolated example; but the case I wish to present here is essentially one of general tendencies and total effects, and I believe there will be no difficulty in showing that our half-century has in this way its own characteristics and prevailing orchestral tone-colour.

The subject of the changes under consideration may not unreasonably be divided into—(A) The influence caused by developments in the mechanism of the instruments and in the practice of the players, (B) the influence caused by the demands of modern audiences, (C) the influence caused by composers acting on their artistic impulse in the development of what is inherent in the art of music.

(A) **INSTRUMENTS AND THEIR PLAYERS.**—It will be convenient here to take the instruments in their usual score order.

Flute.—The flute of the last sixty years has replaced the old "D" conical flute. This latter had a cylindrical bore in the short piece from the blow-hole back to the head, but its greater length or length from the blow-hole to the end was a reversed cone, that is to say a cone with the apex at the end away from the blow-hole. It had an 8th of fundamental sounds from d^2 upwards to a^3 , then over-blew the same notes again into the first or octave harmonic so as to produce another series from d^3 to a^4 , and then over-blew the

original notes into other various harmonics so as to produce the still higher notes. The reversed conical bore gave this instrument a weak tone, the action being in fact somewhat analogous to blowing into a conch shell from the side; and the mechanism of the instrument was defective. The flute of the present day has a bore which is exactly the opposite of that just mentioned, namely conical from the blow-hole back to the head and cylindrical throughout its greater length, and is by this means much stronger in tone. Larger stopping-holes also increase the tone. By greater length, and two to four extra stopping-holes governed by pads and levers to the right (with a 10 hole fl. in twenty-seven inches long), it gains two to four semitones below *B*. As however these latter holes stand normally unstopped so that the instrument does not normally go down to such notes, and as the old finger-holes remain constructed on substantially the same foundation-scale as before, the over-blowing is still always done from the series of fundamentals δ to $c_2^{(2)}$; for this reason the new flute may still be called a "*B*" flute, and the objection very constantly made to its doing does not seem valid. Regarding this increased length it must be remembered that the extension in this as in all other modern instruments gives repeated tone, even when it is not used for stopping and giving lower pitch. Finally the mechanism of the new flute has been greatly improved under what is known as the Böcker system. The artistic use of the modern flute may properly be claimed as belonging to the period under notice in the present paper, composers having only gradually discovered its capabilities. The new applications, due to increased power and improved mechanism, are chiefly in the direction of use of the lower part of the scale (giving practically a new instrument of softer quality), use of keys formerly thought extreme, use of passages of an extraordinary variety formerly scarcely practicable, and use of two or even three flutes together in harmony for colouring purposes. Owing to limits of space I will confine comments to the first and last of these heads. The flute and the brass are the only instruments in the orchestra which have no reed or other vibrating substance included in their construction, and depend wholly on a vibrating column of air the initial motion to which is given by the performer's lip; but the brass are always inharmonic at the point where the flute enters the orchestral scale, hence the low flute notes which are fundamentals have nothing in any way analogous to themselves at that part of the scale to compete with them, and in the new flute they are as already said very strong. Low flute sounds when doubling strings in the unison give a result very much like the parallel and sub-octave steps of the organ, which also, at any rate in Germany, are both

composed of narrow cylindrical pipes with a high blow-mouth. Low flute passages were first adopted in the dramatic orchestra and are now universal. Regarding the use of the flute class in harmony, the effects of occasional thirds and sixths have long been known and applied, but nevertheless the constant use of two flutes in all possible musical relations to enrich the harmony throughout a score is comparatively modern (Beethoven has only one flute in his earlier works); while the habitual use of three flutes, by which is meant piccolo and two flutes or three large flutes, has been reserved to Wagner, Liszt, and composers of quite our own day. The piccolo, hitherto regarded as a dangerous and exceptional instrument from the point of view of the orchestra, is becoming more tractable and is being used to extend compass while forming part of a flute trio, sometimes even polyphonically. Brahms uses it in this last way in both his overtures. The whole tendency of the modern orchestra is to develop its constituent classes within themselves. The piccolo is even now rather an extreme instrument, and it seems not improbable therefore that in the near future the tierce flute or some other intermediate high flute may come in again. On the other side of the normal flute, if the old narrow-bore *Flûte d'amour* in "B" was made cylindrical and mechanically brought up to date, it would make owing to the causes spoken of just now in the case of low flute sounds a very special class of tone at the bottom of the flute class. There is even to existence a thirty-two inch "G" bass flute, which might possibly have its future. There is a tendency towards increased variety in the upper and more melodically significant parts of the orchestra.

Heath.—This instrument has under some aspects much in common with the flute: being like the earlier flute a conical tube, being like both old and new flutes essentially of sixteen-inch length so as to give the $\mathcal{F}$, and having like the new flute artificial prolongations of the tube which give at will extra fundamentals down to $\mathcal{B}^2$ but do not radically affect the system of over-blowing (the remaining still more or less an $\mathcal{B}^2$ in. over-blowing from the fundamentals $\mathcal{F}$ to $\mathcal{C}^3$). The heath-cornal here differs from the conical horn of the old flute in having its apex at the mouthpiece instead of away from it. It differs from the flute also of course in being blown from the extreme end of the instrument through a double reed. Though the stopping mechanism has been improved like that of the flute, the instrument is from the point of view of this paper the most stationary in the orchestra. Of the whole somewhat strident class to which it belongs, all the bass and tenor instruments have been swept away before the progress of concerted euphony, and though

the alto hautboy or Corno inglese is still used (especially for unusual effects), and the mezzo soprano hautboy or Oboe d'amore seems as a novelty, the soprano hautboy practically alone survives for general orchestral purposes at the top of the class and that mostly as a melodic instrument. Modern composers exercise considerable discretion even in using the second hautboy part which is available to them; and the second hautboy, which is too weak below to make an effective contralto part, and by its pleasing quality might unduly distract attention from the melody proper, is often as not in recent compositions plays simply in unison with the first hautboy or rests. Each class-teen has its merits, and no doubt the combination in trio of two hautboys with the Corno inglese (the finest pure contralto voice in the orchestra) gives a unique effect; but as a matter of fact, and apart from theories of what might be done, this class seems to be progressing less than most. The short compass of the hautboy has to be noticed in this connection; it scarcely over-blows beyond the first harmonic, or in other words its normal compass is two octaves only.

Clarinet.—This commanding but difficult instrument is a tube cylindrical throughout except for the bell, blown into at the end opposite the bell over a single broad reed which beats against a slightly curved surface. Being cylindrical and practically closed at one end by the reed, it enjoys the advantage of cylindrical pipes which have one end stopped (in other terms "stopped pipes"), and requires only half of the normal speaking length for producing any given tone; hence its short dimensions, a "B♭" clarinet which goes down to *d* being a shorter instrument than the hautboy which goes down only to *b♭* a sixth above. No other orchestral instrument has this advantage, for all others are in part at any rate conical which deprives them of the double or remote wave of sound and compels them to be of full normal speaking length. The old original of the clarinet, brought into existence no doubt by the discovery of this principle of a cylindrical tube stopped at one end sounding the note of double its length, was called "*chakamau*," and was a tube giving an octave and a third of fundamentals only from *f* to *a*². For the same reason that such a tube acts as a stopped pipe, it is capable of over-blowing only into the even-numbered harmonics (answering to the odd-numbered aliquot parts) and cannot over-blow into any of the octaves. The earliest string even-numbered harmonic is the second at the interval of a twelfth, and the first improvement on the *chakamau*, made about A.D. 1700, put a nodal orifice which enabled it to over-blow into the twelfth. It then gave a series of over-blown notes from *e*² to *a*², in addition to the fundamentals *f* to *a*², and because the

clarinet. It will be seen that this left two notes $B^{\flat}$ and $B^{\natural}$ missing out of the scale, and to provide these a subsequent improvement gave two additional stopping-places for c below and $B^{\flat}$ above; the instrument then overblow into the series $B^{\flat}$ to $F^{\sharp}$, and the scale was conservative. Above this scale acute notes are now given by over-blowing certain fundamentals into the fourth and eighth harmonics, providing a vast range altogether. Mechanical improvements have recently gone on as in other wind instruments. The cylindrical shape of the clarinet gives it its power below, its over-blowing into the even harmonics gives it its power above, the single reed and stopped-pipe characteristic give it its limpid tone, and the mechanism of the key gives it its present wonderful agility. Its new applications under these combined circumstances are very varied. As late as the early part of the century the violin was frequently directed from their work in the string group to make a contralto part for the wood-wind: the development of the low notes of the clarinet (which in its " $B^{\flat}$ " and " A " varieties goes a major second and minor third respectively below the compass mentioned above) has rendered this device unnecessary, and the wood-wind has now a contralto almost a tenor voice of great individuality for use in at least two parts; there is not a modern composer who has not profited by this circumstance. Again in the treble the first and second clarinets have largely ousted the usual pair of hautboys as harmony instruments. The capacity of the modern instrument, again for chromatic use, for every sort of figuration, and for most effects of expression, has operated more than anything else to render the wood-wind group a separate power almost rivaling the string group. The low-quint clarinet in " F ," otherwise Bassett horn, only occurs now as a reposit; but the Bass clarinet in low " $B^{\flat}$ " is since the days of Meyerbeer being freely used in dramatic scores, where individuality and variety of tone are specially a desideratum. Wagner's latest operas contain parts for these clarinets, in addition to the bass clarinet. The small clarinet in " $B^{\flat}$ " is sometimes used now-a-days in the orchestra. The clarinet class in fact is beginning to make felt in the orchestra something of the ascendancy which it already possessed in the military band, and is having a powerful effect on tone colour.

Saxophone.—This is an instrument of the last half-century, and its development and applications are quite recent. It may be called a conical-bore brass clarinet of mellow tone and over-blowing as all conical instruments do into the first harmonic directly after an octave of fundamentals. As a class it extends from high soprano to bass. It has been specially made in plain keys for orchestral use, and has

already been used as a solo instrument in opera by writers of the French and Belgian schools. Each instrument of the class has a splendid medium, and when it is used in groups of three or four, expressive polyphonic effects can be produced. Saxophones with or without clarionets &c. superadded would give good organ effects, and might under some circumstances be used so as to replace the usually not very satisfactory stage organ. At any rate the fact that the instrument has already been introduced into the orchestra justifies its mention here.

Bassoon.—This is a narrow conical-bore instrument akin to the bassboy class, of which the essential length is about six feet sufficient to give the note F. It over-blows into the first harmonic after an octave of fundamentals, and after this additional harmonic octave it over-blows yet again into the second or higher harmonics; these further over-blowings are however vastly easier than those of the bassboy, the bassoon being three times the length of the bassboy, and indeed the bassoon in practical use being gradually bowed into regions where there is a double over-blowing. It is prolonged downward beyond its natural scale more than any other orchestral instrument, and in this way gains seven more fundamental sequences down to B $\flat$, which however do not affect the over-blowing. The points about the bassoon chiefly to be noted here are the constant tendency to force it up as just mentioned, and its being supplemented by the *Contrabasso* or low-octave bassoon. The first-named tendency has arisen on account of the similar tendency to rise shown by the improved clarinet, by the improvement of its own mechanism for the high notes, by the fact that the string bases are now more numerous than they were, and by the fact that new bass wind-instruments have come into the orchestra in the brass group. All these causes have probably acted with equal force, but however brought about, it is a fact that the prevalence of the bassoon-tone in the lower octave F to F $\sharp$ is greatly on the increase in modern scores, and this has a considerable effect on the general colour. Sometimes one bassoon stays low while the other plays in the high register; but more frequently both move in close harmony or at any rate in octaves, and in either case the low base is robbed. The use of the *contrabasso* is on the increase, with a view to filling the gap thus left; but no doubt a third bassoon answers the purpose as well or possibly better; Wagner used three bassoons in his *First* overture, which is not a heavy score, and in all his later dramatic works.

Horn.—In passing to the French horn a highly interesting part of the question arises, and some detailed recapitulation is necessary. The French horn was originally a simple brass narrow conical tube with a hyperbolic-shaped funnel

mouthpiece at the far end, the tube being coiled circularly so as to be worn over one shoulder and under the other arm for giving hunting signals during the chase. When first taken into the orchestra at the beginning of the eighteenth century this instrument was about fifteen feet from mouthpiece to bell, giving the note DDD for fundamental; in other words it was a "D" horn, to match the "D" flute and "D" hautboy. The fundamental on such a long narrow tube, though it would be procurable by the application of a reed or some such contrivance, cannot be brought out by the action of the lips alone in the mouthpiece; instruments of this sort being therefore called in German half-instruments. A considerable series of natural harmonics can however be brought out by the lips compressed in various degrees, beginning with the first or 2nd harmonic, and ending with the fifteenth harmonic or fourth 8th above. I will not trouble my readers by describing the intermediate thirteen harmonics which are well known; it is sufficient to say that the best on a horn are the medium series third to sixth, giving the familiar broken scale of notes somewhat like a large chord of the dominant seventh and ninth extending over an interval of a tenth, and that the horn runs up in compass of actual sounds to "C" in the middle of the treble clef. The idea of opening sound-holes or stopping holes in the horn, as in the case of the ophicleide or of the keyed bagle of the beginning of this century, has never been entertained, and the horn has always been made to depend on the harmonics to be obtained from a tube which is coiled from mouthpiece to bell. But as its primitive state the orchestral horn had consequently nothing like a consecutive scale. Except for the stopped notes and irregularly blown notes, which are pure makeshift and which I will not here discuss, it had only the broken series on a single tube of the harmonic scale above mentioned. Soon however a change was made by substituting for the single "D" horn a set of horns standing with different fundamentals. This was effected by doing what had already been done in the trumpet; by dividing the tube that is to say into three portions, a "body" of permanent length, a "crook" of variable length, and the mouthpiece. The permanent body of the horn-horn as finally developed in this way was about seven feet long; the crooks inserted between that and the mouthpiece varied in length from about eighteen inches to about twelve feet, the first giving the key of "B $\flat$ alto" and the last that of "B $\flat$ bass." These crooks with the help of some supplementary lengthening pieces gave a set of thirteen horns, one for each position in the octave "B $\flat$ " to "B $\flat$," and the whole apparatus went into one box which could easily be conveyed to and from the orchestra. Then by changing crook, which

could be done between movements or even during some brief rest, the composer and player had it in their power to at any rate vary the fundamental and attendant harmonies at not very long intervals. Considering however that the remodelled mechanical means now about to be mentioned was already invented in the middle of the eighteenth century, it seems somewhat wonderful that the art should have been content with these certainly primitive arrangements till within the period covered by the present paper. The use of the limited harmonies of the hand-horn, even though the key of that instrument could be changed now and then, had a most potent effect in working orchestral music. It created stereotyped formulae in one of the best classes of instruments, it gave this middle to the harmonic structure, and it deprived the orchestra of an additional chromatic melody-instrument of the greatest possible beauty. It is true that composers early, or at about the time of Beethoven's second period, found the advantage of adding a second pair of horns regularly to the orchestra and having two or even more keys going on at the same time, which gave some relief under each hand. But even thus it was much like having a game of post among the instruments in order to secure this and that note, and the arrangements could not compare with the use of instruments each of which had a consecutive scale within itself. The mechanical device introduced for brass instruments about 1810 (and already invented as above said nearly a century before that) was the lengthening valve, called in German *ventil*, which instantaneously on the touch of a finger on a piston, &c., lengthened the whole bore from mouthpiece to bell by opening out short lengths in the middle. The valves thus brought into action by the fingers are as finally developed four in number; lowering the fundamental sound of the tube by a semitone, a tone, a tone and a half, and two tones and a half, respectively. By different combinations of the four valves and using them singly or cumulatively the fundamental can be more or less efficiently lowered through eleven successive semitones or over an interval of a major seventh, and the harmonic series will begin anew at each semitonal stage; in other words the instruments can be put instantaneously and without recourse to the crooks into eleven different keys, which is the same thing as giving them a consecutive semitonal scale throughout their whole range. The French horn has three valves only, lowering it through six semitones or over an interval of a diminished fifth; which is quite enough for its purpose, and indeed the third valve is sparingly used by the skilful horn player.

The art generally must be said to have been slow in adapting itself to the requirements of this new device in the

case of the French horn, and as the matter is all important from the point of view of the present paper I will endeavour to analyse the motives and causes which have operated in it.

The new valve-horn has two drawbacks. In the first place though the valve attachments reside in the body of the horn and act more or less whatever crook is put on to the body, yet on the other hand they do not act true except on a limited number of crooks for which they have been specially constructed. Though each valve has an accession sub-valve by which it can be up to a certain point tuned, no lengthening valve has yet been made sufficiently expansible to serve equally for a very small crook like the high "B $\flat$ " and a very large crook like the low "B $\flat$." The valves can only add a more or less fixed middle length, and that middle length speedily gets out of proportion if the length of the whole tube is greatly increased or diminished by crook. As a matter of fact lengthening valves as made at present only contemplate the application of three or at most four eighth crooks, and according to the best practice of valve-making these crooks will only be G, F, E, and B $\flat$, of which F and E are the preferable. Now I have not seen a case certainly where a composer boldly indicated such an impossibility as "valve horns in C" at the beginning of his score, but numerous modern composers have done what is practically equivalent, namely to indicate a "horn in C," "horn in B $\flat$ base," &c., and then include in the part notes which they obviously mean to be played with valves and which cannot indeed be played in any other way. This practice is common with horns in D, and possibly the valves as made in some countries may cover though indifferently that crook. But valve horns in C and low B $\flat$ are decidedly at present inconsistent. The consequence of this is that modern horn players who always have the valve attachment have acquired a habit, since the beginning of the transition period, of transposing all such parts on to the crooks which suit their valves, and chiefly on to the F crook. This, though probably the best compromise under the circumstances, is not satisfactory. The tone of a horn crooked into a low key, say C, is more full, more trombone-like, than the tone of a horn crooked into F; furthermore the conversion of the greater part of the composer's natural notes into piston notes cannot be attended with exactly the same results, especially in a running passage; and furthermore again on the second horn at any rate a number of low notes thus transposed must be of doubtful intonation. And this last point brings us to the second drawback of the present valve horn, which is that its valves when used consecutively always give too sharp a note, even

when the crook is favourable; they are quite accurate only when taken singly. Thus a held note on the low $F\sharp$ on the space below the bass clef can only be rendered on the F horn by depressing three pistons together and taking a diminished fifth off the second harmonic, but this is considerably too sharp, the player has to correct the intonation at best he can by his breath, and the note shakes.

I beg to say that there is only one proper course open to the modern composer, namely to study duly the conditions of the existing valve-horn, which is a valve instrument that can be reduced to a natural instrument by simply not touching the pistons and it is in fact a natural and valve instrument in one. He must then, if he wishes to specify one of the extreme crooks of the horn, either to get its special tone or to have the benefit of the natural notes in that key, write only natural notes throughout the part, or at most confine his accidentalisms to the use of the scottish-valve in the upper register which can easily be tempered. On the other hand if he writes (as he probably much more often will) for the medium crooks peculiar to the valve-horn, he should to his own interest write so as to make the least possible use of the cumulative valves; with the crooks of F , E , and $E\sharp$ open to him he can very easily do so. This general procedure on the part of the composer is what Wagner, after some tentative and certainly not always satisfactory proceedings, finally arrived at; and I do not know that his practice as shown at the last can be improved upon. Turning to the performers, I think they also should remember that they have a double instrument under their control. That they should transpose miscalculated parts, where extreme crooks have been erroneously combined with demands on the valves, or where as in the case of Wagner's middle-period operas impossibilities are asked of them in the way of suddenly changing crook, is not only excusable but necessary. But why they should apply this practice to the works of the older masters who wrote obviously for the hand horn and nothing else, I do not understand. Neither should they transpose the parts of modern composers who write for this and that crook and know what they are about. I think that conductors should consider these distinctions and make the horn players bring the crooks necessary in each case into the orchestra with them. The present plan of universal transposition is not the way to get the best tone out of the orchestra.

However it is time that I proceeded to deal more directly with the function proper of my paper, which is to show the effects of the valve horn generally on tone colour. Whether quite correctly written for and used or not, the fact remains

that the valve-horn has for modern music supplanted the mere natural-horn; and as this new instrument still retains its character of natural horn if the pistons are not put down (for the mere presence of the attachment itself does not appreciably disturb the tone), the result is a clear gain and a gain of an irrevocable nature. The modern horn can sing any melody, take part in any polyphony, and proceed chromatically to any note, while it can revert at pleasure to the functions which formerly characterised it. The genius of composers knows how to utilize all these capabilities without going to excess. The stroke has been an extraordinary enrichment of the medium register of the orchestra in numerous combinations, while there is the necessary advantage of increased freedom given to other groups to spread beyond the medium; the horn acting here often as conductor and as substitute. Even two valve-horns would be sufficient to secure much of this result, but as four horns have been left in the orchestra as a heritage from the period at the early part of the century when modern chromatic and modulatory work caused the introduction of the second pair, and as these four must remain if only for the execution of so many compositions of that little period, the composer will always have a full group at his disposal. Where solidity in the medium has degenerated into heaviness or confused effect, it is only from composers sometimes forgetting that they need not always use the four instruments because they are there. Apart from making three and four-part harmony with the first pair, the second pair of horns finds a sufficient rôle in occasional employment of the extreme crooks with natural notes, in taking say the B $\flat$ or E crook against the F crook of the first pair where there is much modulation, in alternating with the first pair to give the latter rest, or in actual doubling of the first pair so as to increase power. No tone in the wood-wind group can in any case compare with that of the horn in its power of piercing through superimposed sounds, while its player has to be essentially a singer; and on the whole the valve-horn is the chief factor in our new orchestral development.

Trumpet and Cornet.—The Trumpet is the 5-foot instrument lying above the 4 $\frac{1}{2}$ -foot horn, being of narrow bore with the first two-thirds cylindrical, and blown into with a hemispherical cup for mouthpiece so as to produce a brilliant tone. The natural instrument had crooks at first for B $\flat$, D, and C; but since then it has had crooks successively from high B $\flat$ to low A. Three piston lengthening-valves have been fitted to the natural trumpet, applicable chiefly to the F crook, but also to the E and B $\flat$, and sometimes to the D crooks; and this valve-trumpet is the instrument of our modern orchestra. In England a short slide

working by the finger over the cylindrical portion on the trombone principle has been applied to the natural trumpet in the crooks F, E, Eb, and D, lowering its fundamental through two semitones and producing an instrument of very perfect intonation at any rate; but the slide has given place to the valves, which can lower through six semitones, and are also more favourable to the legato. Precisely the same remarks apply here as were made for the horn, as to the modern trumpet being a natural instrument and valve instrument in one, and as to the uncertain action of composers. Owing to the simplicity of the part however, and the want of importance of the lower register for practical purposes, there are perhaps less objections here to the valve trumpet players transposing natural trumpet parts to suit valve-crooks. In a less degree than the horn, but not dissimilarly, the chromatic trumpet has contributed to change the character of our modern orchestra. It is still I think to say that a trumpet which can sing a part has lost its essential qualities. That depends solely on the composer. The whole orchestra is moving together in the direction of increased polyphony in varied timbre, and there is no reason why the trumpet type should not be included. The use of chromatic trumpets in three parts is also a feature of the new orchestra, where the score is larger; and these combined with the bass-tuba and three trombones form a magnificent septet covering the whole range of a chorus of human voices, for the trumpet goes up to A above the treble-clef staff. The piano effects also of the trumpet in the medium or low are now more used than formerly. It is to be observed that a special narrow-bore valve-trumpet exists also in high Eb, running up to D above the treble clef, and this is the proper instrument to use where very high effects are required.

Along with the trumpet ought to be mentioned the Cornet. The use of this wide bore 4-foot instrument to replace by its necessarily lower harmonics the higher harmonics and commanding tone of the 3-foot trumpet is quite deplorable, and is the only serious element of retrogression which I have to call attention to in our modern tendencies. The cornet cannot attempt to rival the second trumpet in the low notes below the treble clef staff, while on account of its wide bore it goes no higher in upward compass than the ordinary first trumpet. Its tone is snappy. It has been allowed to take the place of the trumpet partly because it is easier to play; but I confess I am not in possession of the reasons which prevent the player from bringing both trumpet and cornet into the orchestra, and using each as required by the scores to be performed. It has also obtained its present position because it was first in the field, having been one of

the products of the French dramatic orchestral revival, but the valve trumpet had been invented, but the valve-trumpets are now manufactured in abundance. The cornet has a legitimate function in the orchestra only for taking some florid part, where its extensive powers can come into play, superimposed over the two ordinary trumpets; and this is how some of the best dramatic composers from Meyerbeer onwards have used it. I trust I may meet with some sympathy in my protest against its use to replace the trumpet in scores which are not written for it. The valve-trumpet is there ready for all modern and ancient uses, and I believe it merely requires the fiat of conductors to restore the trumpet to its legitimate place in the orchestra, where its clear piercing tone is quite unique and unrivalled.

Trombone.—The trombone is approximately a 7 or 9 or 12-foot instrument, with a bore which is for the first two-thirds cylindrical specially designed for bringing out the low harmonics, and with a slide which lowers the fundamental through six positions or over an interval of a diminished fifth, the same as the three cumulative positions on the Horn. Its three varieties, alto, tenor, and bass (covering altogether exactly the range of the contralto, tenor, and bass voices), are the natural substratum in the score on which rest the two trumpets; nevertheless it is to be observed that such instruments are explosive in their sound, while the use of the slide prevents legato effects, so that on the whole their introduction in the bass and low medium produces a very special effect, and artistically speaking they with the baritone below them form a separate group. An endeavour has been made to replace the action of the slide by three piston-valves, which, as the third piston is here a piston of two tones, can one position below over the trombone slide, and of course furnish a better legato; but the intonation-defects of the cumulative valve are very noticeable on the trombone, whose principal function is to fill in the low part of the harmony, and the ancient slide for that reason still holds its own. The employment of three trombones as an almost belongs to the period here under notice, being greatly developed since 1850, but otherwise there is not very much to record as to artistic change in their use. The alto trombone being uncertain in its lower notes is giving way to a first tenor trombone, which is a pity, especially where the trumpet just above it is also allowed to drop out. The bass trombone in G, F_2 , or E_2 , though a magnificent instrument with an extraordinary compass, is also going out of fashion in favour of a third tenor trombone; partly because it is a lingering instrument, and partly because its register is being pushed up by the inclusion in the orchestra of the baritone sax to be mentioned. Modern composers are making great use of

the versatility of the trombone trio in the way of presenting very close or very extended harmonies, they are also much using its piano effects, and some writers as for instance Beethoven are beginning to use it even polyphonically within itself as a more orchestral feature.

Baritone-tuba.—This is the lowest base of the bugle family, that is to say of instruments which have an over-widening bore and are called in German whole-instruments because they can sound their fundamental with little difficulty. The old Ophicleide was a large bugle with stopping-valves and keys, the Saxhorn is another name for the bugle family as fitted with valves and pistons since about 1845, and Euphonium, Bombardone, and Baritone-tuba are names for low representations of these last; I give these definitions as the nomenclature is not always well understood. With the help of four valves the baritone-tuba gives a chromatic very low base, and as its mouthpiece though conical is large the performer can correct the errors of the cumulative valves; hence it is regarded as a trustworthy foundation to the brass group. The baritone-tuba is playing an important part in the development of the orchestra of our day. It is forcing up the bass trombone and converting the trombone trio of three-part harmony into a quartett of four-part harmony. It is in many cases replacing the old less strong low held-notes on the horn, and it is even with its general and accommodating tone furnishing a substitute for the violoncello or second bassoon when the double-bass is playing uncessantly by the superior octave. The first of these is really an important matter. No doubt the presence of a fixed base at the bottom of a set of instruments which like slide-trombones are played quite subjectively at the will of the player just as human voices sing, has a very steadying effect on the performers; and the opportunity for four-part harmony is the low medium of the most powerful part of the orchestra is also a valuable new resource. Still if the bass trombone was reduced to taking the tenor part in the harmony, it would very soon cease to exist, and this would be a great loss. In the best scores the baritone-tuba is independent, acting first with one set of instruments and then with another, and the bass trombone is only now and then put into the position just mentioned. On the whole this latest base member of the Sax family is probably destined to play a noteworthy part in the building up of the modern orchestra, but I beg to protest its passing as the frequent substitution for it of the baritone-tuba, otherwise called Euphonium, which has by no means the same colour or quality.

Percussion.—Among these instruments I wish to point to the third or medium kettle-drum ranging from A to D recently introduced. It is to be found now in every

respectable orchestras, and by removing some of the intolerable restrictions caused by having only two kettle-drum notes at a time to cover all modulations it has given variety to many scores. Composers however were rather slow to take it up. The bass drum or *Gran cassa* has lately been used in a halfheartedly with its own stick, a prominent example of which is in Rubinstein's "*Ocean*"; or in a regular triangle with a pair of kettle-drum sticks, examples of which are frequent in Liszt.

Harp.—The habitual use of the harp in the orchestra belongs exclusively to the period under notice. It requires a refined taste to employ it correctly, and being obtrusive it is apt to betray any shallowness which may be in the music; but the modern dramatic orchestra of any rate would not be complete without it. Its low tones are splendid and can be heard against a moderately full orchestra, while the treble and harmonic effects are well known.

Organ.—Apart from the special effect of the stage organ, this is only useful for assisting the orchestra to support vocal masses. The introduction of its pedal notes, especially if the organ has 32-foot tones, creates a complete transformation of the whole body of sound, and it is to be feared that many anti-dramas have been committed by not sufficiently recognising this in preparing the score; but modern composers have made great use of it, even sometimes in secular music, and it has to be mentioned here.

Strings.—The stringed orchestral instruments played with the bow have this peculiarity, that their four strings are (unlike the pianoforte) all of the same length, and gain their difference of pitch only by difference of substance; this being on the present subject, because the natural tendency has consequently been towards the use of the higher strings and especially the first, where the brilliancy of the sound is greatest. However as to actual manufacture the only fact here noteworthy is that the E string on the double-bass has become a necessity to balance the increased power and upward tendency of the orchestra; though the fourth string mounted on the bridge rather impedes execution, the four-string double-bass is in our times causing the three-string double-bass.

The cause of the changes in the general tone of the string orchestra is our times consists almost exclusively in the enlarged skill of the musicians, whether for left-hand techniques or for bowing; and I find that this subject divides itself into the following heads, (a) *figuration*, (b) *forms of accompaniment* in monodic work, (c) *double-stopping*, (d) *drum work*, (e) *special effects of pizzicato, scordino, and harmonics*, (f) *departure from the medium register*, (g) *use of extreme keys*.—

"a."—There was scarcely more change from the time when the strings nearly duplicated voice parts to the developed figuration of the masters of the early part of the nineteenth century, than there has been since the time of Beethoven down to our own in this direction of the creation of varied figures. A glance at any score by the modern writers will reveal this without my going into detail. There is very little now in the way of figure that a violinist cannot do on one string or across the strings. Some stock figures still remain more effective than others, but nevertheless the variety of modern figuration almost eludes analysis. Perhaps the most polyphonic part of modern scores is the second violin, which then asserts an individuality against the melodic first violin. The violoncello again is more independent of the double bass than it ever was before, and this free voice moving about in the lower part of the scale is one of the chief causes of the enrichment of our modern orchestra.

"b."—Though polyphony and contrapuntal treatment are on the increase, the mosaicic style concurrently holds its own, and for this modern scores show a great increase in variety of forms of accompaniment. The ordinary tremolo on one string, or two strings double-stopped, is well known. The broken tremolo on two strings double-stopped, that is to say where the up-bow takes one string and the down-bow takes the other string, is less known, but has an effect of its own. The accompaniment figure which may be called the "widened trill" is almost a speciality of modern times; in the widened trill on a single string, the first finger steps and the third or fourth finger rises and falls on the same string at a distance which may extend to about a perfect fourth, while the bow continues its course; in the widened trill on two strings, one finger steps on one string, while another finger rises and falls on the next adjacent string at an interval which may extend to an octave, while the bow continues its course and the wrist oscillates between the two strings. The figure here mentioned has in the upper region produced those delicate and almost ethereal effects in which the moderns have so frequently acted on the initiative of Berlioz and Wagner. *Arpeggio accompaniments*, with all sorts of complications of bowing, are also on the increase, though they are not very effective.

"c."—Double stopping, unknown to Handel and scarcely known to Bach, is at the present day an essential feature of the orchestra, where modern harmonies could hardly be carried on without them. When judiciously used on favourite intervals, double-stoppings are an unvaried gain, and are one of the chief causes of modern sonority. The violoncello has a speciality here. Violins and violas being

instruments *de bravia* must be held in position by the thumb at back of the neck of the instrument, almost equally so the double-bass on account of its size. But the violoncello is an instrument *de poche*, which can be supported conveniently by the body alone, and the thumb can with ease come from behind on to the finger board for various purposes. The thumb laid transversely stops fifths very purely; in other double-stopping also it can stop one note of the interval while the whole stretch of the hand is available to go forward for completing the interval up to the limits of an octave. Violoncello double-stopping is becoming increasingly resorted to for developing sonority in the lower registers.

"*d.*"—Where double-stopping fails modern composers are having recourse throughout the whole string range to "*divisi*" work, thereby immensely increasing the fulness of the harmony and its extension both downwards and upwards. Violas are so largely divided now-a-days, that it is doubtful if we shall not shortly see first and second violas introduced as a normal feature in the composition of orchestras and scores; the change if it ever occurs will be a potent one, for the tone of the viola is very special.

"*e.*"—I will not stop to do much more than mention the increased use of *pizzicato*, *seordine*, and harmonic effects. These devices are sometimes abused; for instance too much *pizzicato* is as bad as the incessant employment of the soft pedal on the pianoforte adopted by indifferent accompanists of singers, who do not realize that this tone effect when prolonged is quite unnatural and painful. On the other hand it is to be observed that a *pizzicato* on the lower part of the double-bass is at least as good as a bowed note of the same duration, and the moderns are fully alive to this.

"*f.*"—Constant use is now-a-days made of close harmonies in the higher and lower regions as opposed to the medium. When this is done one seems to have three orchestras in place of one. It is almost unnecessary to point out that orchestral violalists now mean; to such positions as the tenth and eleventh on the first and second strings.

"*g.*"—Lastly I would mention that composers are less afraid now-a-days of extreme keys for the strings than they used to be. This is not an unmixed advantage, and perhaps is one of the few things where the tone of the orchestra is changed for the worse, for the strings must always have their favourite keys. In connection with this subject however it is to be noticed that the composers of the present day are rapidly throwing enharmonic considerations whether of notation or fact to the winds, and holdily treating the orchestra as an instrument of equal temperament, which if

not an advantage, must I think at least be classed as a strict necessity of our times impossible to be contended against.

*Summary of Hearing (A).—*As the instruments have generally been considered previously, it will be better that I should here run up results concerning them. The application of new key mechanisms to the flute by Boehm, to reduce it to equal temperament and otherwise improve it happened rather more than half a century ago, and all the other members of the wood band have subsequently been treated in like manner or nearly so. The chief characteristic of the wood wind of the most modern scores is an increasing freedom from such traditional methods as held notes and simple melodic doublings, and a development in their place or in supplement to them of figurations special to the classes and independent of the string group. This proceeds from the improved mechanism just mentioned and the increased sense of polyphony among composers and audiences, each acting upon the other. Another characteristic is the greater variety caused by instruments occupying new parts of the scale or having their tone improved in particular regions. A third characteristic is increased richness due to numerical enlargement of the classes within themselves; though this of course will only take place in specially large scores. Passing to the brass, the valve horn has almost revolutionized the modern orchestra. That sense of fulness and sonority which distinguishes it, making it as compared with the old orchestra much what the new organ with double diapasons or double reeds is to the old organ without them, is due in great part to the use of the valve horn and all the consequences it brings with it. The brilliant tricks now found in the brass, and the new basses found in the bagle family, are all due to the valve. The third kettle-drum deserves notice in making what the poet Campbell calls "the stormy mass of the drums," and in helping out the swing of the orchestra. In the string foundation to the orchestra, immense volume and effect have been gained by increased demands upon the skill of the concertists, and by converting what was once a quartet into virtually a group of very many parts largely emancipated from the rules of the older counterpoint but developing a new contrapuntal system of its own. If there are those who would suggest that all these changes tend to noise, I can only say that now as in all ages there are those who abuse and those who know how to wisely use the resources of the trees in which they live. Wordsworth says that "sweetest melodies are those that are by distance made more sweet", but though this may represent a frequent mood of the dreaming amateur, yet well-directed fulness and power will always appeal to the general audience.

(B.) *Drama and the Public*.—I may now for the short remainder of my paper emerge a little from technicalities; with which I hope I have not overcharged the paper, but it is necessary to build inferences upon facts. Dramatic music has always from the times of Monteverdi's "Orfeo" to the present day been the precursor of concert-room music in the way of orchestral innovation, and French music has always been nearly exclusively occupied with the drama. The revolutionary period of French history from 1793 to 1848, that is to say the period during which the people though nominally under the elected citizen-king Louis Philippe were in reality trying conclusions with the monarchical principle, witnessed a great outburst of popular craving for effect in the music of the stage. This was the period of Halévy's "Juive," Bachofen's "Desventurés Célestes," and Meyerbeer's "Robert le Diable," "Huguenots," and "Prophète"; following as they all did Rossini's "William Tell," which had appeared just before in the reign of Charles X. This was also the period, it may be added for indicating the chronology though the works were not written for the Paris stage, of Verdi's "Ernani," Balfe's "Bohemian Girl," and Wagner's "Rienzi," "Flying Dutchman," and "Tannhäuser"; "Rienzi" was written under the Meyerbeer influence and the "Flying Dutchman" was written at Paris. During this period the Moslan system of rechartering was being applied successively to the flute, hautboy, and clarinet; the cornu system was incorporated regularly into the dramatic orchestra; the clarinet, not perhaps very well used by Rossini, was given great prominence to by his successors, and the new bass-clarinet was taken into the orchestra. Simultaneously the valve cornet or cornet-à-pistons then new was introduced into the orchestra as a melodic part lying over the two trumpets, and the keyed ophicleide also comparatively new was added to the brass, thus giving altogether to the brass group an independence never before thought of. The harp was also added permanently to the orchestra. These considerable changes may fairly be set down to demands of the French public. The historic period of the Second Empire in France from 1848 to 1870 was one in great measure of martial display, gratifying to if not initiated by the nation, and the requirements of the military system gave opportunity for the inventive faculties of the instrument maker Adolphe Sax, a Belgian by birth but naturalized from 1842 onwards in France. Apart from his invention of the keyed saxophone he developed the valve as applied to all brass instruments, and the consequence of his improved mechanism was the adoption of the valve-brass throughout Europe as a permanent feature of orchestras, in lieu of its tentative and occasional use as for instance in the

"*Jaune*" of Haldy. The valve-horn was followed by the valve trumpet. I have already indicated the great importance to the orchestra of such developments. The bass-tuba again is the orchestral representative of M. Sax's large family of saxophones. There can be no doubt that all these changes in the brass had their first impulse in the military spirit prevailing among the French during the early part of the Second Empire. An instance of the direct effect on the orchestra caused by public demands is the question of the accommodation of audiences. Now-a-days the number of those who wish to hear is so greatly increased that the old moderate-sized concert rooms are going out of fashion and larger orchestras are quite a necessity, while orchestras more fully constituted are certainly also directly in the taste of the listeners. I have always been under the impression that the best form for a concert-room is an oblong room with a parabolic recess at the end, the orchestra being grouped round the focus of the parabola. If the larger rooms could maintain this or some similar principle there would be nothing to complain of; but, unfortunately this is not so, and the orchestra in many large modern buildings exhibits acoustic defects. On this question of the shape of our buildings I am doubtful whether we are advancing. Another instance of the action of the public is the increased demand, caused by increased knowledge and sensibility, for detailed light and shade and expression of every kind; the consequence is that in a hundred matters which were formerly left to the performer the orchestra is now de-individualised and made to act under word of command in the shape of expression marks carefully distributed among the different performers and controlled by the conductor. The effect of this on the collective tone is of course very great.

(C.) *Action or Coöperation.*—From one point of view this head may be considered to be not distinguishable from the last, on the ground that composers only respond to the public demand. But the greater the artistic gift, the less this is so; and though the approval of the public must be the ultimate aim of every artist, yet with many the interior impulse to create is so great as to act almost alone and without any reference to externalities. In other words in the case of many composers, and probably in the case of all the best, the initiative proceeds from them and not from the public. Among composers who have helped to push forward the most modern orchestra as a direct result of the exercise of their genius, I think the following may be specially mentioned:—Meyerbeer, Berlioz, Wagner, Liszt, Verdi, and Brahms. The remark applies less perhaps to Meyerbeer than to any other on the list, but nevertheless his genius for the spectacular march was genuine and went a long way

towards securing the independence of the brass group in the score and the orchestra which now prevails. Berlioz' powers, if highly unpaired, were certainly singular and uncertain; and so I think with his orchestral effects, some of which are perfect in their balance, while others seem to have been miscalculated. Berlioz' strength did not I believe lie in the grandiose, though he was much addicted to that, but in the subtle and delicate. The unrialled violin effects in the scherzo of the "Romeo and Juliet" symphony were compared by a hostile if witty critic of the day to the squealing of badly grained syringas; but a more sympathetic writer said that they formed the ideal orchestras of insects and grasshoppers, and I think that that is the verdict of posterity. Those silk-like effects in the orchestra were invented by Berlioz and bequeathed by him to Wagner, on whom generally he had much the same influence that Spontini had on Beethoven. No modern composer has modified the orchestra by direct impulse from within himself so much as Wagner. It is not perhaps always realised that he did not begin by any particular alterations or reforms in orchestral usage, and that these only grew up along with the expansion of his powers as a creative composer; up till "Lohengrin" in 1847 there is nothing very special in his use of the orchestra, and he did not attain his true orchestral style till he had created an entirely new form of composition by "Tristan and Isolde" in 1859. Apart from such questions as reliance on the separation and individual treatment of the minor classes of the orchestra, the employment of an excessively large score in his latest works, and the introduction of a new class of brass instruments of the sax-horn family, Wagner's chief characteristic is an immense polyphony throughout the whole range of the score: his counterpoint has the boldness of Bach, with all the resources added of nineteenth century effects, the licence of dramatic music, and his own individuality. Though Liszt was two years older than Wagner, his career as a composer for the orchestra began after the appearance of "Lohengrin," and after he himself had attained his fortieth year. While learning much from Wagner he treated the orchestra in quite his own way; as indeed was natural considering that he wrote for the concert-room. It is at first sight somewhat remarkable that an artist who had given the whole of his life theretofore to becoming the first virtuoso in the world upon the piano-forte and to writing music for the technical display of that instrument, should with little effort or delay attain the position of an almost unapproachable model for effective orchestral treatment. However it is probable that the same minute attention to detail which his first career accustomed,

enabled a man of his gifts to treat the orchestral instruments also in a sympathetic spirit. Certain it is that he developed brilliancy and every description of expression in the orchestra, as he had previously done on the piano-forte: the best examples of which are his 17th *Poème* and his *Symphonic poems*. Verdi not only is the founder of the new Italian school of musical drama, but must also be included in considering the developments of the orchestra: the broad polyphony created by the priest-son of Wagner is unknown to him, but short of that his characteristic in his later works is an infinite variety of orchestral tone peculiar to himself. Brahms has brought the effects of polyphony in wind and string parts, and contrast of groups, to the same pitch in the concert-room that Wagner had done in the theatre, while using scarcely more than the orchestra of Wagner's first manner. He is the direct descendant of the great masters, especially those of the Vienna school, and while I wish to say the least possible in this paper regarding the merits of composers as such, I must point out that orchestration which has a great style at its back must exhibit purities far more effective than orchestration which has not. I think there will not be much credit at the statement that for sincerity and general completeness Brahms's works show the same yet attained in orchestral tone.

DISCUSSION.

THE CHAIRMAN.—I am sure we are much obliged to Dr. Mackay for this paper, so learned and interesting, and which we shall find most instructive to read. There will always be an immense amount of difference of opinion as to the quality of tone and evenness; but I must say I do not altogether sympathise with those who are afraid of valved instruments, for the improvement in the making of this class has been enormous the last few years. As far back as 1878 I was on a jury in Paris with Mr. Gevaert. We put valved instruments to most severe tests, we listened to them from behind screens, making the players sound the harmonic series with each valve separately and in combinations, but I thought their tone very pure, and their intonation just.

Tampering with the tone colour of a composer, one of his most important means of expression, is objectionable. No one would dream of altering the colours of a fine picture, but in music this is often done without the slightest compensation. It is much to be regretted that although we have had this

interesting historical account of the orchestra's tone-colour, we have no means of letting you hear by mechanical means the exact tone of an orchestra of the past. We shall, however, have a revolution in this matter, for the phonograph will be able to register accurately and permanently the tone-colour of our present orchestras and hand it down to posterity. How interesting it would have been if we could have turned a handle and heard the effect produced by ancient hautboys and other old instruments. No one has ever heard the quality of tone which Handel heard, and to re-produce all these different tones would be most valuable if it were possible. It seems to me that Dr. Mackean has given us a great deal to think about. There is no doubt that we shall have in these days of advanced musical education to make this question of tone-colour in orchestras a real branch of study. You know how very little is learned by the young student who buys a book on instrumentation and finds out how high an instrument can go and how low it can go, and so on; that is merely the threshold of a subject of enormous interest, and I hope that some day we shall have professors who will take their pupils to the phonograph and let them hear the different combinations. It should, I think, be in the power of important institutions to have an orchestra on the spot, and let the students hear such harmonies as Dr. Mackean has alluded to—for instance, a four-part trombone harmony. It would give young composers a chance of forming individuality in their style, and as they grew up they would know the resources at their disposal. There is no reason why the tone-colours of an orchestra should not be known to us as by special names, just as blue, green, red, and yellow are used to describe particular colours. Names, no doubt, will be found for them. It was a long time before mankind found names for colours. Dr. Mackean, as an old classical scholar at Oxford, will bear me out that the Latin purple was used for blue, and white, and sage-green, and all sorts of things, not because the Romans did not know the difference, but because they had no name to express it, and there is no doubt that Hebrews and other ancient nations knew differences in colours but did not know what to call them. Somebody must have invented those terms, blue, red, yellow, and green; and there is no reason why somebody should not some day invent colour-names for the orchestra, which we now put down as brilliant, somber, light, or heavy. I hope some day that the expense will not deter us from giving historical concerts with the music of Handel in its own tone-colour, instead of adapting it to the modern orchestra or adapting the modern instruments to them. It would be deeply interesting, presenting us with an enormous amount of novelty in music.

Mr. CHAMBERLAIN.—How are you to get hautboys and trumpets? Certainly not the same instruments now as in Handel's time. It is on record that the trumpets of Handel's time played as soft as the hautboy, so that we may take it for granted that the tone was very different to that now.

The CHAIRMAN.—They would have to be made; but is that impossible?

Mr. CHAMBERLAIN.—The instruments are now only made experimentally, and in a sort of tentative way; we have nothing to guide us.

The CHAIRMAN.—They might have come in numbers. There must be a large number of trumpets existing of the time of Handel, even in old regimental bands; they often preserve old instruments.

Mr. CHAMBERLAIN.—An interesting thing perhaps to mention in connection with the subject is, that although in Purcell's time the orchestra did not practically exist, he used three others (four hautboys), bassoon, and trumpets.

Mr. CHAMBERLAIN.—It might perhaps be interesting to call attention to the incompleteness of the flute family in the orchestra. It is the only instrument of the orchestra which has not a complete tone scale—that is to say, that no member of this family goes from the top to the bottom of the orchestral range. There have been tenor and bass flutes, but they have never gone beyond manufacturers' experiments. They have never been successfully performed upon, I think. I recollect hearing some concerts many years ago under the auspices of Rudall Carte & Co., in which these instruments were used, and I believe the drawback was the excessive effort of wind power required on the part of the players. Mr. Benjamin Wells was very successful in his efforts on the bass flute, but I think they found it very difficult to find anyone else to produce a good tone on the same instrument. I think composers would very much like to have a more complete scale in the flute family, they would certainly be ready to make use of it.

Dr. HARRIS.—The old set of recorders which is now in Grosvenor Museum, Chester, is really a set of old flute instruments. I have heard them played, and my brother has lectured on them once or twice.

The CHAIRMAN.—Some old song books have pictures of flute quartets.

Dr. HARRIS.—"O Mistress Mine" was arranged by Morley in one of his six books for these instruments, if I remember rightly. The flute part is in the British Museum, but this is not the melody, but is an inner part, the melody being played by the viol.

Mr. CHAMBERLAIN.—That flute was of course the *flauto à tre*.

The Chairman.—It had its own tablature, which I may say shows it must have been in common use.

Mr. Weiss.—They were used very much in Germany. At the Military Exhibition there was one over five feet high, of about the fifteenth century.

The Chairman.—I am afraid Dr. Maclean's paper will frighten some young students by letting them see what a heavy amount of work is now required in modern music, and the enormous amount of resources there are in colouring.

A vote of thanks to Dr. Maclean was then passed unanimously.

THOMAS LEA SOUTHOATE, Esq.,
IN THE CHAIR.

THE NOTATION OF THE FITZWILLIAM
VIRGINAL BOOK.

By J. A. FURNESS MANTON, M.A., F.R.S.

I HAVE been asked to tell you something about the contents and the peculiarities of notation of what is, perhaps, the most important collection of virginal pieces in existence—the book formerly known as “Queen Elizabeth’s Virginal Book,” which is preserved in the Fitzwilliam Museum at Cambridge. That title, it has been amply proved, is altogether false and misleading, and indeed that it should have ever arisen is only an illustration of the carelessness with which musical manuscripts were examined in past times. For against one of the pieces, the “O, Be, Mi,” of Sweelinck, on p. 208, there occurs the date 1575, when Queen Elizabeth had been dead nine years. And another piece, “Dr. Seif’s Juck,” exists in a manuscript in the British Museum, where it is dated December 28, 1621. Probably the name, for which Hawkins is responsible, arose from the fact that all the composers represented rank among those of the Elizabethan era. I may assume, I suppose, that the general outline of the history of the book, as brought to light by Mr. William Chappell and lately by Mr. W. Barclay Squire, is known to you all. Briefly it may be recapitulated as follows:—

A Cornish gentleman, named Francis Tregran, the head of a rich and powerful Catholic family, was seized on account of his religion, in 1577, and after many short imprisonments was thrown into the Fleet prison, where he remained for at least twenty-four years. In this prison eleven of his children were born, among them his eldest son, Francis Tregran, who

entered the College at Doonoy in 1585. On leaving Doonoy, in 1591, he was for two years chamberlain to Cardinal Allen in Rome. He afterwards returned to England and succeeded in buying back his father's lands; but in 1598-9 he was committed to the Fleet himself on a charge of recusancy. He died there in 1609, owing a large bill to the warden for board and lodging. It is this Francis Tregian who has been supposed to be the scribe of the greater part at least of the famous manuscript. The splendid binding is undoubtedly a piece of Netherlands work, and many other things connect the book with the Netherlands. One of the most largely represented composers in the collection is Peter Philippi, who was an English catholic ecclesiastic settled in the Netherlands, and probably a connection of Morgan Philippi, one of the first prebendaries of the Doonoy College. You will remember, too, how close was John Bull's connection with the same country. The date I quoted before for a piece by Bull (1541) would of course invalidate the younger Tregian's claim to be considered as writing the whole of the volume; but it has been supposed that two styles of writing are to be discerned in the MS., though they are so much alike that it is difficult to be sure whether they are two or one. That the family of Tregian had a good deal to do with the book is quite certain; the "M^{rs}. Katharina Tregian," whose name appears opposite a psalm by William Tindall, on p. 315, was probably the grandmother of the younger Tregian. But more eloquent than this is the frequent occurrence of odd little contractions of the surname, no other proper name being thus treated throughout the book. "Treg. Ground" is the name of a piece by Byrd; "Pasena Dolozosa Treg." is a piece by Peter Philippi, dated 1593 (the year after the younger Tregian left Doonoy for Rome); the initials "Ph. Tr." are set against a psalm by Byrd; against the first line of a pg. by the same master are the initials "F. Tr."; and finally, a short piece called "Heaven and Earth" has, for its composer's name, the three letters "Fre.," no doubt a contraction for "F. Tregian." The theory of the circumstances of the book's completion is, then, that the actual book, bound as it is now, was bought by Francis Tregian in the Netherlands, and that, during his imprisonment in the Fleet, he wrote out from musical manuscripts in his possession the transcript which has been, in some cases, the only means of their preservation.

Its later history is more odd; how it got into the hands of Dr. Pepusch is not known, but Hawkins tells us that Mrs. Pepusch, who was Margherita de' Elipio, the famous singer, used to try to play the pieces, and though she was an accomplished harpsichord player, she never could get through the first piece in the book, the famous set of variations on "Walsingham." If one thinks of the executive powers on

the pianoforte of the most accomplished *prima donna* of the present day, we shall not find it difficult to believe what Hawkins tells us about Mrs. Pepusch. In 1762 it was bought at Pepusch's sale by R. Bremner, who gave it to Lord Fitzwilliam before 1783. The price given for it by Bremner was £10.

The difficulty of making public the contents of the manuscript seemed at one time quite insuperable, seeing that it was not possible to find anyone with the requisite knowledge who would also have the leisure to work at it in the museum at Cambridge. At last, two years ago, an ardent lover of old music, who happens to be an accomplished photographer, Mr. C. F. Bell, undertook to photograph the entire volume on a reduced scale, so that the work of translation into ordinary notation could be carried on where it was most convenient. The exquisite neatness and clearness of the writing made it seem as if it would be easy enough to reduce the music to a form in which it would have some meaning for modern musicians; but for various reasons, which I am going now to explain, the task has been by no means a light one.

The volume consists of 440 pages, ruled with six-line staves, of which 418 pages are written. All three clefs are used, and in all possible positions; but, as a general rule, the most common are the G clef on the fourth line from the top of the upper stave and the F clef on the third line from the top of the lower, so that if one looks only at the outside of the two staves we read them as in modern piano music. This arrangement gives two lines for the same note, middle C, and the use of the different staves for the middle parts is very curious, foreshadowing, as it does almost exactly, the present custom of confining the two staves to the two hands. Suppose, for example, that a scale of six notes, from G to E, occurs in an inner part of the composition, and that the left hand is holding the lower C, or for some other reason it is not desired that the left hand should play a note above C; the first four notes of the passage are given on the lower stave, ending with C on the top line; after that there is a little gap, called nowadays a "direct," in the place of the D in the lower stave, and in a corresponding place on the upper stave the note D, and the subsequent notes of the scale appear, but with a "direct" before them on the C line, to indicate that the passage is one and the same in the two hands. In spite of this device to impress the structure of the parts upon the player's eye, the place of the missing notes that have been transferred to the other stave is often occupied by rests, just as if the other stave did not exist. Occasionally eight notes are arranged as we arrange them now, in groups of four or six, according to the rhythm, but far more often their tails are joined quite without regard to the rhythmic divisions of

the bar; and, as it need hardly be said, no attention whatever is paid to the player's convenience in the matter of placing the parts so that their sequence is seen. We will take the instance of a piece in two parts. In the upper one a *minim* is followed by eight *semiquavers*, while in the lower the answering group of *semiquavers* begins the bar, followed by a *minim*. The *semiquavers* of the upper part will be written almost exactly over those of the lower, so that at a cursory glance one would be tempted to read them together. This circumstance is of itself a considerable difficulty to the transcriber when the number of parts is largely increased, and it makes it quite inconceivable to us how any human being can ever have attempted to play from this book. As Burney says: "Some are so difficult that it would be hard to find a master in Europe who could play them without a month's practice."

From the point of view of the history of notation, the book is of very great interest. One of the most curious things is that we stand, as it were, at the turning-point between the old music and the new. As yet bars are used only in the most casual way, and I do not think that it is too much to say that there is hardly a single piece of any respectable length that preserves the value of its bars the same from beginning to end. The time signatures have very little to do with the actual value of the contents of the bars, but they indicate rather the ratio of measurement. For the most part they are three in number—the barred semi-circle indicating generally, but not always, all the varieties of quadruple time, whether of eight, four, or two *minims*' value; the semi-circle with a point in it, used for 6-2 and 3-2 time generally (for 3-1 time—i.e., with three *semibreves* in the bar, the barred semi-circle is used); and thirdly, the figure 3, indicating nearly always 6-4 or 3-4 time, and always followed by the use of black *semibreves* and black *minims*, with void notes to indicate what we now call a dotted note of either value. These signatures are of course a survival of the complicated system of Mode, Time, and Prolation, and this use of black notes is practically the last appearance of that system in music. At this moment of transition, as I may call it, the notation of triple time was puzzling enough when it was indicated at the beginning and preserved through the piece; but when triple time is introduced for a whole section or variation, or for still shorter spaces, such as for special groups of ornamental figures, the method of writing them down seems to have been strangely uncertain. Considering, however, how ambiguous the text is in many respects, it is wonderful how few passages there are where the intention of the writer is really doubtful after a careful study. At first we were often puzzled by the appearance of a little "6a" or "3a" in the middle of a

move, or between the two staves, on comparison of many specimens we saw that it was an almost exact equivalent to our practice of putting a figure 5 or 3 over a group of notes, with a slur to show what the figure refers to. It cannot be denied that the ambiguity of this slur is happily avoided in the older system, and as the little figures are placed only against one part at a time, the same purpose is served, the ordinary time being restored by a little barred semi-circle. While this "6:" sign lasts, the notes used are black semibreves and minims, the black minims being, of course, indistinguishable from crotchets. And here it must be pointed out that, almost as a universal rule, the apparent value of these occasional passages is triple time is twice the real value. Thus, in a bar of what we should call common time, with two minims in it, if against the two minims it is wished to put a part in triplets, the number of notes-equivalent to the two minims will be six black minims—in fact, just as if they were six ordinary crotchets. No deviation from our modern practice appears here, until we find the groups of three divided into a long and a short note, where we should put a minim and a crotchet with a three over them, as the equivalent of the normal minim, the manuscript puts a black semibreve and black minim. So that it is necessary to bear in mind that not only do the black notes lose, according to the old rule, one-third of their value, but two-thirds, for the three black semibreves appear against the two minims, which together make of course one void or ordinary semibreve. In the "divisions" or rapid ornamental passages, when the place of four semibreves is to be occupied by six notes (according to us, a set of sextolets with "6" above them, expressed as *sextiguavers*), we find here a group of six notes apparently *denarseniguavers*—i.e., with three transverse strokes to the tails. I say apparently *denarseniguavers*, for the real *denarseniguavers* have one more stroke, and are exactly like our *semdenarseniguavers*—i.e., with four transverse strokes. An odd little convention exists here, in cases where a passage of divisions follows immediately upon a more polyphonic passage. We will assume that the polyphonic passage ends with a chord, of which one of the parts thereupon sets off at a run. Instead of the other parts, in the same hand, remaining on their chord for a little time, while the ornamental part flourishes about, all the parts have the same value as the first note of the running part. Very often this is a dotted quaver, when the lower or upper parts of the chord are left as it were hanging, the rest of their time not being accounted for at all. One must remember how complete a division existed in the minds of the musicians of that time between part-writing, which was strictly vocal, and free writing, such as was mainly represented by chords for

the lute. The union of one with another would naturally be somewhat confusing at first. One of my examples will be the transcription of a madrigal by Luca Marenzio, "Cosi' morib," the third part of his famous "Tirsi." It is transcribed by Peter Phillips, and its runs and embellishments are strongly prophetic of the manner in which later vocal pieces have been treated by pianists.

One of the greatest and most serious difficulties in the task of reducing this music to modern notation lies, of course, in the department of accidentals. Everyone who has scored a madrigal from the original part-books knows how very much is left to the imagination of the singers in this respect. The truth, of course, is that the laws of active life were so generally understood by all musicians until the end of the sixteenth century at least, that all who could sing the parts could be trusted to put in the required flats and sharps in their own part. In the early days, music, as it has been most truly said, was viewed horizontally, and not vertically—i.e., the progression of its parts was everything, the sequence of its harmonies mattered very little. And nothing is more certain than that, from constantly hearing them in vocal music, where, in just intonation, they are far from disagreeable, people's ears had got so accustomed to what we call false relations that they did not feel them as in any way objectionable. In certain conventional passages, such as this very common cadence—



one can still trace a beauty which one would not sacrifice by either flattening the upper part or sharpening the lower. To this pattern many passages conform in the book, a rigid figure of greater elaboration representing the lower part of these two and running counter to the leading note of the other part at every turn. Yet there are many other cases where the leading note is left out, as if by carelessness, where it is obviously required as much by the nature of the mode as when the piece is cast as by the requirements of modern ears. Modern ears, to say the truth, cannot be absolutely trusted in these matters; there are numerous instances of false relations that simply cannot be altered without doing despite to the general design of the piece in which they occur. For a sharp added here will necessitate another somewhere farther on, and before long we shall be led into a far worse fix than if we had left the original passage alone. It is a curious thing that though on the piano-forte many of these sound quite execrable, yet on the virginal, with its resonant

ness, they are forgiven quite readily, and even after a time one comes to regard them as in no way disagreeable. I don't wish to lay too much stress upon this acquired taste, for of course we all know that a taste for almost anything may be acquired, and in dealing with the music of antiquity something which we call either sentiment or the historical sense, according to our different predilections, is apt to smooth the way for our enjoyment. In the matter of these slips and flats, then, we have used our best endeavour to keep the character of the piece, and to respect the text of the manuscript to the utmost, and there is no single case where we have added or taken away an accidental in such a way that the reader would be misled as to the reading of the manuscript. Accidentals have been conjecturally added in brackets above or below the notes, and all necessary corrections of reading have been duly notified at the foot of the page, some more important ones being left for further discussion in the preface which is to appear with the last monthly part.

These conjectural emendations are, of course, a matter of great delicacy, and it is only when one is quite convinced of the existence of an error that they can be permitted at all. But as no one is infallible there are a good crop of textual errors in the manuscript, which are the more excusable when we consider the conditions under which the task of writing it was performed. One very curious instance of a mistake is clearly to be attributed to a slip of the pen in the copy that Tregian had before him. A certain recurring passage in the left hand against a quiet treble suddenly gets wrong in the middle of a line, and at the point where it gets wrong the clef is changed. The obvious error goes on through that line and about half the next, where the old clef comes back and order is at once restored. It was very difficult to see exactly what the mistake was, until the passage was tried without the first change of clef; it proved at once to be right, and both changes of clef were unnecessary. The source of this error was at once plain; in the copy from which it was taken the clef was written wrongly at the beginning of a certain line, and governed the whole of that line. Tregian made an alteration of clef accordingly, and got his change of clef into the middle of his line.

In one point there is a little ambiguity in respect of staves. It is very common to write such chords as this, where it is clear that the bottom note is a semibreve expressed for convenience as two tied minims; the upper part is also clear, but what about the middle? It is impossible to decide absolutely. There is a curious foreshadowing of a plan carried into practical use by Samudale Bennett, that a tied note is very often



carried over the bar-line by means of a square slur. The practical drawback to this is, that in some cases the square slur and the two notes it joins are apt to look like a pair of ordinary quavers.

I may perhaps be permitted to tell you of one very gratifying thing that happened sometime after beginning the work. No. 9 is a set of variations on "Goe from my Window," by Morley, and this had been fully discussed and its accidentals supplied conjecturally, when we came upon No. 42, called "Goe from my Window," and attributed to John Munday. It turned out to be the same composition, except that No. 42 had an extra and very beautiful variation, and to compensate this a bar left out in Variation No. 5. A comparison of the two settings removed all doubt as to the rightness of our former conjectures, for, with hardly an exception, every accidental supplied in No. 9 appeared in the text of No. 42. As it is one of the most beautiful things in the book, I shall play it to you on the virginal. This instrument, belonging to Mr. Dolmetsch, is a very fine specimen of a sixteenth century instrument of Italian make; it is undated, but a written sentence appears on the crumplecase concerning the jacks, "*Non percussus ideo*" ("Unstruck I am made"), in a hand that cannot be later than 1600. The action is, roughly speaking, the same as that of the harpsichord—i.e., the jacks, furnished in this case with leather, not quill plectra, rise on the pressure of the keys, striking the strings as they pass them, and being provided with dampers to prevent the sound of the plectrum as it returns to its place. It has one very advanced peculiarity in practical music, and that is what is called a "short octave," the seven lowest notes being arranged so as to give these sounds in succession, beginning from the bottom note, which is apparently E—

Apparent notes: E, F, F sharp, G, G sharp, A, B flat.
Real sounds:— C, F, D, G, E, A, B flat.
(Examples: "Goe from my Window" and transcription of a madrigal by Peter Philips.)

By reason of this same short octave, I cannot play you on the virginal one of the most interesting pieces in the book, a work which I am bold to say has greater interest than anything else of equal date. It is an "O, re, mi, fa, sol, la," of Bull, and its structure consists of a series of repetitions of the six notes of the hexachordum durum up and down, each time rising a whole tone. He begins on G, and, as you will perceive, soon gets into serious difficulties—namely, at the fourth repetition, on C♯. He does not modify his intention in the least, but, the way to express an enharmonic change being, as yet, quite unknown, he makes one for himself, and it is of so odd a type that for a long time we supposed the text to be corrupt. But there it is, as clear as can be. He

gets over the B major repetition all right, but he goes back ahead if he goes on in C sharp major. He introduces this repetition by making the first note of the plain-song or hexachord the third of the chord he takes it on—i.e., as the mediant of A major. But how does he express it in writing? He has decided to adopt flats for the rest of the plain-song, so he starts his *canto fermo* of scordibrevs on a D flat, putting it straight between an A and E natural. It will be clear to you that an interspersed instrument of the older time this whole piece would have been quite unreasonable, and there is good reason to suppose, from a remark I think of Zarlino's, that some rough kind of tempering was in use in instrumental music as early as this. Anyhow, here stands the piece, and this is not all it has to tell us, for after taking us round the whole circle of keys, always rising one whole tone, he settles down into the equivalent of G major and proceeds to exhaust the possibilities of strange time-combinations. It is to be noticed that when he goes to F, instead of going on to G he skips a semitone and takes A flat for his next rest. In repetition 27, while the top part has the *canto fermo* in the usual scordibrevs, the alto has alternately pairs of minims and triplets of black scordibrevs; the tenor pursues a fairly even course of alternate black minims and black scordibrevs, and the bass alternates the alto's pairs of minims with triplets of black scordibrevs, just reversing the order of them, so that the alto and bass are precisely against one another. It is, of course, a passage that cannot be appreciated by the ear at all, nor played except very slowly, with any hope of making it clear; but as a specimen of the direction in which the furthest musical minds of that day were going, I venture to think it of quite surprising interest. (Example: "Ut, re, mi," of Ball.) A lady lately said to me, of another passage of less complication, but of somewhat similar character, "Why! it's infringing Beethoven's copyright!" The curious division of many of the pieces into numbered sections is a small difficulty, for at each division there is a regular double bar, with repeat marks on each side of it; we have decided to leave these to the discretion of performers, since it is impossible to say that they are not meant to be repeated, and as impossible to assert that they are. I should like to show you one other extraordinary experiment in time, also made by Ball—the "In Nomine," No. 127. This, you will perceive, is a far simpler plain-song, consisting of softened notes, but the time of the piece, though not so expressed, is 22-4, two bars of common time being succeeded by one of 3-4. The construction of the thing is as clear as possible, and there can be no doubt as to its interpretation; it is really not as annoying to the rhythmic sense as one might suppose.

In regard to the ornaments, which are of such constant occurrence through the manuscript, we have left them as they are in the text, and commented, in a preface, not prefixed to each monthly part, that they should be performed according to the directions given by Mr. Donartaler in his masterly primer on "Ornamentation." One other occurs, which he does not touch upon—the double stroke that is closed at both ends, so as to make a little rectangle. It has been left, but it appears at least possible that this is a more correct of the double-stroke ornament when it has been wrongly inserted.

I think this completes the number of peculiarities of the manuscript. You have heard a set of variations, and two of the more serious pieces based upon *small forms*. Besides these two great classes of pieces, there are a large number of dances, short or long, with one of which, a delightful little "Mincedin," I shall conclude my illustrations, prefaceing it with a plaintive little melody, called "The Irish Ho-Ho!"—i.e., "Ochone," or lament.

DISCUSSION.

THE CHAIRMAN.—Our first duty is to return a hearty vote of thanks to Mr. Fuller Maitland for his very interesting and instructive paper on this curious book, to which we have all listened with the greatest pleasure. The manner in which he played the examples on this beautiful old virginal was indeed instructive and graceful.

A vote of thanks having been passed, the Chairman said:—I am glad that Mr. Fuller Maitland has devoted his attention to this particular book rather than going into the history of the instrument itself. The book is amongst our musical treasures, for it is the most notable virginal book we possess. There is, of course, one known as Foster's, one by Costanzo, and one which belonged to Lady Dorothy Neville; but this is the most famous. The instrument itself, and all of this type, are of great interest to us, as the virginal and the harpsichord were the precursors of the pianoforte, and in the music written for them we see the development of the modern music. The old music, I think, speaks us a quaint anthem some to us. I cannot help admiring the construction of some of it, though possibly it does not possess much emotion, such as we get in modern music. The pieces, and especially the one by Dr. John Bull, which Mr. Fuller Maitland played, are really interesting studies for contemporaries; but I should be

sorry for any pupils to-day who had to do similar work. I happened last night to take up a book by Sebastianus Virdung, published in 1511, which I believe is the first book written on music, and is in the old Rhenish dialect. In an early opening page he gives a rough drawing of the virginal, from which we can see what the instrument was like, and he says: "It is newly invented, and I have as yet only seen one of them."

The virginal was, however, known very much earlier in England. One of the proverbs inscribed on the old Manor House at Lockingfield, Berks, says, Henry VII, says, "The slack string is a virginal soundeth not aright: It doth abide no trusting, it is so like and light." The tuning pins in a virginal have no holes to put the end of the wire through as have those in our modern pianoforte, and the strings are only wound round, a matter which requires an enormous amount of pressure to get them to hold and stand the proper amount of tension. Respecting the *musica fidei*, I cannot help thinking that as our modern major scale gradually developed from the old modes, it was found necessary to employ some accidentals first for harmonic purposes, then to make the order and size of the diatonic intervals as we have them now, and it thus happened that notes formerly flattened became sharpened. Our ears will no longer bear what our forefathers accepted. Mr. Fuller Maitland alluded to the occasional change of clef in certain passages: one has to look for that in old music, for scribes did make mistakes. In some manuscripts you will find a large number of variants, clefs often alter at each line of the manuscript. There is an interesting example of this in the Attwood manuscript, written in Vienna, when he was having lessons from Mozart. The exercises came into the possession of Sir John Goss, and were then given to Professor Bridge. At one point Attwood makes a terrible mess of his exercise, and there we find written by Mozart: "Mr. Attwood, you are a fool." The fact was he had mistaken his C clef line. Short octaves were not so very sacrosanct in my younger days, but I have never before heard the explanation that it enabled one to play larger chords. Certainly that is an advantage. The piece by Bull with the tortuous transition of keys is very interesting; it shows the growing tendency, even at that period, for improving the temperament, and the desire to modulate into different keys. Indeed, it is a capital example, displaying how a great composer like Bull endeavored to meet the unequal temperament difficulty. The music, as you will notice, is difficult to play, and so is the instrument itself, for each note has to be hit with exactly the same degree of force, and the fingers properly lifted or the notes will not speak.

Mr. F. G. EDWARDS.—Have any of the original manuscripts of this book been traced?

Mr. MARIANO.—There are other copies of many of the manuscripts in other books, many of them being in the volumes mentioned by Mr. Southgate. One prelude occurs in *Parthenia*.

Mr. ANNE WILLIAMS.—I was specially interested in the matter of 6-1 and 3-2, which I take to be an idea of the unity of time. I fancy that the 6-1 referred to six units and the 3-2 to three double units. The old composers had a feeling for the unity of time, crotchet or quaver, which I doubt if we have now, for I think we have lost it.

Mr. SOUTHGATE remarked that in this virginal book was a piece by John Munday, a curious kind of fantasia, which was descriptive of a storm. This was surely the first instance of programme-music.

Mr. MARIANO.—This piece is trivial and very funny. The storm is represented by a run in the bass, whilst the calm weather is distinguished by a passage in the treble.

Mr. SOUTHGATE.—The difficulty of getting the time of some old music is very great indeed. I have some old part-music for voices of the period of James I., which has no bars. I have often wondered how the four or five performers kept together and arrived properly at the end. The way to translate this is to take a semibreve as a unit, and count back from the end, because at least the performers should finish together.

Mr. MARIANO, in replying, spoke of the old barring. The time might be eccentric and difficult, but where bar lines were employed, it was obvious that every bar was always self-contained. He thought that the difficulty of the harpsichord and virginal touch was not so much in getting down the keys as in allowing them to come up, and in that way securing repetition. A staccato touch had to be adopted—one could not "glide"—as the little plectrum on the top of the jack would not fall and speak again. He felt sure that Mr. Williams was right about the 6-1 and 3-2.

May 14, 1893

H. C. BANISTER, Esq.,

IN THE CHAIR.

MANX MUSIC.

By W. H. GILL.

It is strange but true that, so far as the general British public is concerned, the Isle of Man, notwithstanding its great antiquity, its unique political constitution, its ancient statutes and venerable customs, its invigorating climate and charming scenery, has only just been discovered.

But the latest, and perhaps not the least interesting, feature of the discovery is the fact that this little Manx nation possesses a native music of its own.

The object of the present paper is to give a short account of the writer's recent quest for Manx music, and to submit to this Society, and through it to the musical world at large, some specimens of this hitherto unknown quantity. He can claim no special qualification for the task beyond, perhaps, the mere accident of his nationality—the fact that he is a Manxman. As contributory circumstances, more or less favourable, may be mentioned the following: that the material was collected for the most part at first hand, from the natural intonation of voices unspiced by modern instruments; on the spot; with his own hands; and in the presence of competent witnesses.

The subject ought to be of interest as opening up a hitherto unexplored field, and thus suggesting material for a new chapter in the history of national music.

The present essay, written as it was at a short notice and with obvious restrictions as to length, is merely suggestive,

and necessarily incomplete. Such as it is, it may, perhaps, serve as a prolegomenon to the more adequate treatment of the subject by other and abler hands hereafter.

Mr. Haskin has clearly demonstrated that the art of a country is the direct expression of the mind of its people, and if this be true of the arts in general it is pre-eminently true of music in particular, for of all the arts the most direct, the most subtle, and by far the most expressive is music. Hence, if we would gauge the quality and depth of the emotional temper of a nation we shall find it faithfully registered in its native melodies. And conversely, if we would rightly estimate the quality of the music of a nation we must examine and weigh all the forces—physical, intellectual, and moral—which have acted through the ages as factors in its production.

A national melody is peculiar. Unlike any other form of musical composition, it is not the work of one man but of many. Indeed it can hardly be said to be "composed" at all. It would be more correct to say of it that, just like the flower or any other natural organism, it grows. Its evolution obeys the laws of heredity, environment, natural selection, and the survival of the fittest. It is subject at one time to development, at another to degeneration.

Of the innumerable factors which contribute to the building up of the national music of any given country, the following four are perhaps the most important:—

- I. Locality.
- II. History.
- III. Language.
- IV. The Temperament—physical, intellectual, and moral—of its People.

I. Locality.

The scenery of the Isle of Man is unique. Its occurrences, though of comparatively small scale, are rugged and picturesque. Of the many thousands who visit its shores every year, all are fascinated by the loveliness of its glens, its wealth of golden gorse and purple heather, and its breezy "green hills by the sea." It seems as though the great agencies of Nature had worked with loving hand in making it fertile and beautiful. Ages before the advent of man, the great frozen sea of the glacial period had wrought for it in its two-fold function. First as carrier, importing foreign material to enrich its soil, and second as sculptor, carving "many an enduring portrait in the profile of its scenery, and many an imperishable engraving on rock and boulder" (Dr. Hensland). And as the observant eye sees beauty everywhere, so for the attentive ear kind Nature has provided of her bounty. On the mountain heights the busy hum of bees,

on the rock-bound coast the multitudinous chorus of sea-birds, and down in the verdant vales her own sweet "songs in the running brooks." Verily this little island, like that of Prospero, is "full of sweet sounds." It would be strange if the dwellers in this enchanted land were not infected with the spirit of romanticism, and it is easy to see how to a simple-minded people the sights and sounds of Nature gradually assume definite shapes, and at last find expression in wild melodies and the conception of fairies and phantoms. The faculty of seeing the music of the expression may be allowed, and of hearing the music itself so finely portrayed in Shakespeare's *Cymbeline*, is one of the earliest instincts in the evolution of man, and the very essence of the poetic art is but the emphasizing and higher development of this primitive child-like faculty. Hence it happens that to the unsophisticated Mancunian—the cottager in the glen and on the lonely mountain-side—a belief in *luriers* is to this day an essential part of his being. Until quite recently the mythology of Manland was as real a thing as was the mythology of Ancient Greece. And when, in the words of Professor Sharp, Nature and "the sensitive imagination of man" meet, we have that "result or creation" which we call Art. Thus, in a sense, Nature and Art are one.

So I thought a few weeks ago on the occasion of my last visit to the island in quest of music. I arrived there at five o'clock on a bright sunny morning in Spring. In the garden a bird was singing love-songs to his bride. Something within me seemed to say "write it down." I had never done such a thing in my life. Indeed I had always supposed that the reflections of birds were inexpressible in musical notation. Nevertheless I would try. To my surprise and delight, as I listened, the sounds became more and more definite both in pitch and rhythm. I wrote it down and here is the result. Apart from other considerations, it may be interesting as being unquestionably the oldest *Manc* song in my collection! But this little incident has, to my mind, a far deeper significance; for have we not here, in that little throbbing breast of this primitive master-singer, the fountain and origin of the music of the western world? The scientists, from Pythagoras to Helmholtz, have given us elaborate treatises on the ratios of vibrations, the laws of harmonics, and the direction of the string. Musical historians take us back to ancient Rome, to Greece, to Egypt to trace the origin of the scale. Here in our own land, among the may blossoms of our hedge-rows, this heaven-taught singer seems to have anticipated the latest discoveries of modern science, for behold! his alphabet of tune is identical with our own! (This proved to be the actual notes of the diatonic major scale.)

Our friends will give us a few specimens of the more ancient Maas tunes and, as proof of their antiquity, you will recognise in these some of the interests peculiar to the ancient modes.

Laying aside all technicalities, the ancient modes may be simply illustrated as follows. Play the scale of C on the piano beginning and ending on C; that is the *Ionian* mode. Next play the same notes beginning and ending on D (no sharps or flats); that is the *Dorian* mode. Next play the same notes beginning and ending on E, that is the *Phrygian* mode. Then the same notes beginning and ending on F (no BP); that is the *Eolian*. Again, the same notes beginning and ending on G (no FB); that is the *Mixolydian*. Lastly, play the same notes beginning and ending on A; that is the *Aeolian* mode. In medieval times several of these modes or different ways of using the notes of the major diatonic scale were commonly adopted, not only in church music but in secular music. Of these modes two have survived to modern times, the *Ionian* and the *Aeolian*, and this in obedience to the universal law of the survival of the fittest. One we call the major scale, the other the minor scale.

Maas music is constructed principally on these two surviving modes, but there are also a good many tunes in the second or *Dorian* mode which, as you see from the diagram, is a major scale with a sharp sixth and a flat seventh. Then, again, in the *Aeolian* mode, the seventh is sometimes flat, sometimes sharp.

Our first illustration is "Hie my gairh slough'in"—a song addressed by a maiden to her companions warning them against the faithlessness of their lovers. It is in the *Aeolian* mode, the seventh note appearing in both forms.

Our next illustration is the air of a song which used to be very popular. It is called "Sooner"—the equivalent of which in colloquial English is *swearing*. Although constructed on the ancient *Dorian* mode it is as freely and "taking" as a song on such a subject ought to be.

Illustration No. 3, "Mylecharane," is the best known of all the Maas tunes. It has always been associated with a silly lilted quite unworthy of the music. The Rev. T. R. Brown (himself a poet and a musician) admits that the tune must originally have been fitted to better words. Dr. Chappé suggests that the title "Mylecharane" may be a corruption of "Molloy Chlora" (= Praise the Lord). The suggestion seems a happy one, for in style and structure the tune is essentially a *choral*, and a *fine* one too. Our friends will give us the melody in octaves with piano accompaniment. You will please be prepared for the shock produced upon modern musical ears by the flat leading note on the last beat but one.

II. HISTORY.

The next factor in the music of a nation is its History. The aboriginal inhabitants of our island were a race of hunters and fishermen and the same race originally inhabited Scotland and Ireland. They came from Spain and were known there as the Iberians. In Scotland they were known as Picts, in Ireland as Scots. The Romans called them Picti, the painted people; the Brythons called them Scots, the tattooed people—from the Celtic *gobtuinn*, to cut or carve. They called themselves *Craibinn*, from *craibh*—the forms of boats and birds and fishes which they tattooed on their faces and bodies.

The next chapter of Manx history relates to the Celtic invasion. That was a gradual process extending probably over centuries, and as to the date of it Professor Blays says: "nobody knows how long ago" it happened. The Celtic race consisted of two branches, the Gaels or Goidels, represented by the Irish, and the Britons represented by the Welsh. It was from these people (the Irish branch) that we got the surnames so peculiar to Manxland—names beginning with G, K, and Q. For example:—

Clague	connected from	MacLough—the Leach's son.
Collister	" "	MacAlister—Alexander's son.
Clucas	" "	MacLennis—Lester's son.
Costain	" "	MacAnwyn—Augustine's son.
Hinck	" "	MacLinn—Linn's son.
Kewin	" "	MacKee—John's son.
Quayle	" "	MacPhail—Paul's son.
Quirk	" "	MacQuirk—Core's son.
Quilham	" "	MacWilliam—William's son.
Quilrough	" "	MacWalker—Walter's son.

In the tenth century the island was invaded by the Danes, under King Orry, who introduced into the kingdom of Man the first representative parliament in Europe—the original of the present *Tynwald* and House of Keys.

Towards the end of the eleventh century it was invaded by the Norwegians under Godred Crown. From the Norwegians we got many of the beautiful rime crosses to be found in our country churchyards, for while the oldest of these are distinctly Irish in character, the later ones are unmistakably Scandinavian. From the Norwegians also we have derived the greater part of our place names, for example: Fendale, Flaxwick, Grenaby, Niasbyl, Langness, Laxey, Parwick, Scaurlet, Sulby, and many others. Strangely enough, we find little or no trace of the Norse element in our ancient language. This has been accounted for on the supposition that the children of Norwegian fathers and Manx mothers

would naturally adopt their mothers' tongue in preference to that of their fathers.

In 1193 the island was conquered by Alexander III. of Scotland, and became a part of that kingdom. It was he who introduced the well-known armorial bearings of the island, the three legs.

In the fourteenth century the island was seized by Edward II., and has ever since been subject to the English Crown.

From the foregoing brief outline one would naturally expect to find in the national music of the island traces more or less marked of each of the nations who have had possession of it from time to time. As a matter of fact, traces of the Irish, Scotch, and English element are abundant. One of our tunes has been claimed by the Irish, by the Scotch, and by the English. It is called in Manx "*Kierck Catterine Marrys*," which means "*Catherine's hen is dead*." Wherever the tune may have originated, the fact signifies that it has, from time immemorial, been associated with an ancient custom held on St. Catherine's Day, and peculiar to the Isle of Man. Some of our tunes, however, are essentially Scotch in character, some are unmistakably Irish, a few might pass for Welsh, while many have the unmistakable ring of the Old English School. Considering what an important part the Norsemen played in Manx history one would naturally expect to find a strong admixture of the Norse element in its music; but for the reason already suggested in connection with the language, the babies with Manx mothers and Norse fathers would naturally "*take*" more readily to the Manx tunes than to the Norse ones. But, however that may be, a farther knowledge and comparison both of Manx and Scandinavian music may reveal resemblances which have hitherto escaped detection.

Illustration No. 4, "*Wandscap*" ("The Hower"),—One of our melodies (No. 4), which appears both as a song (in slow time) and as a dance tune (in quicker time), is so much in the style of a Russian pastoral melody as to cause the suspicion that it may have been imported into the island with its national airs, which certainly came from Svalby. As the original tune, as given in "*Mona Melodica*," consists of only eight bars, the present "*arrangement*," in which the melody is considerably "*developed*," may be open to grave question. But on the subject of "*restoration*" I shall have more to say later on. Meanwhile the audience are requested to suspend their judgment. No doubt other claimants for our tunes will come forward as time goes on. Indeed, it stands to reason, looking at the history and the geographical position of our island, that many of its tunes must have been imported ready-made, and not composed on the spot. But,

even so, Manodan should at least have the credit of having gathered into her bosom these wifs and strays of the surrounding lands, and thus kept them alive in the great struggle for existence.

One element in the Mann tunes, be they native or only adopted, is very conspicuous—viz., their sad and plaintive character. The dance tunes are bright and merry enough, but the songs are, for the most part, as melancholy as music can make them—sad, and yet not morbidly so. They sound like the wail of the Babylonian captives. For ages past the island was the battlefield, as it is now the playground, of the surrounding nations. Its simple people have gone through the various stages of a conquered nation. Happily, they have passed through the furnace, and have emerged a free people. Though the marks of the fetters remain impressed upon their music, the fetters themselves have long ago fallen into the sea. The cloud has passed away, brighter days have come, and freedom reigns supreme. The Isle of Man rejoices in being "The Land of Home Rule."

Our next illustration, No. 5, "My Kinnis is wraghty" ("The sheep under the snow"), is, perhaps, the most distinctively Mann of all our series. The title suggests the character of the music. It is tender, wild, dreamy, and altogether highly poetical. It is noticeable how the ancient modes lend a peculiar charm—the foreshadowing of what in modern music we should call frequent changes of key—the melody passing successively through the following chain of keys: G min., D min., F, G min., E $\flat$, F, E $\flat$, F, D $\flat$, G min.

III. LANGUAGE.

The next factor in our analysis is language. The ancient language of the Isle of Man is Gaelic, a branch of the Celtic. It was once the language of Europe and the universal language of the British Isles. Within the memory of men and women still living one-half of the population spoke Mann. Not many years ago it was taught in the schools; it was to be heard in the law courts, alike from the bench, from the bar, and from the witness box. It was to be heard in the church service on one or more Sundays during each month. Now it is entirely discontinued. It has ceased to be taught in the schools; it is rarely heard in conversation except among the peasantry in out of the way places. Writing thirty-six years ago, an accomplished Mann scholar described it as "a doomed language—an iceberg floating into Southern latitudes." To-day it is practically a dead language. To the philologist and antiquary, however, it possesses no small recommendations. It is peculiarly fertile and expressive. It is eminently a poetical language, dealing largely with metaphors. For

instance, the *Mansu* name for someone is "a little boat in the boat." An incontinent person is styled "with me—with thee." For "the water is boiling" they say "the water is playing." The rainbow is "the going North." The Zodiac is the "footpath of the Sun." The word for child is "half-saint," and for bed "half-meat." The same sound of the language has a grand rolling resonance and rhythmical pulse. Take, for instance, the last clause of the Lord's Prayer, "For Thine is the Kingdom";—"Son thins y eornght as y phoot as y glieyr, son dy leugh as dy bragh. Amen."

This is the grave and somber side of the language. It recalls the thunder of the big waves as they roll into the ocean cañons. But it has also a light and bright fantastic side, as illustrated in the following verses in imitation of the blackbird's song:—

"Klene fang, Klene fang,
Apyrn choo, Apyrn choo
Vel oo cheen, Vel oo cheen,
Slee fenn, Slee fenn,
Lhondoo, Lhondoo."

The next illustration (No. 6) will give some idea of how the *Mansu* language sounds when it is sung.

"To tra goil thic" ("Time to go home, time to go to bed. The stars are growing hot, while the cinders are growing cold"). This tune was sometimes sung to the words of "Barbara Allen," or, as the *Mansu* call it "Barbery Ellen." The air is so quiet and pretty that we may shortly hear of a claimant for it.

There is an old English rhyme, familiar to all of us, which sounds like an exact counterpart of this *Mansu* one. You shall judge for yourselves:

"To bed, to bed," says Sleepy-head;
"There's time enough," says Slow;
"Put on the pot," says Grumpy Wad,
"We'll sup before we go."

IV. NATIONAL TRAITS.

We now come to the fourth and last factor in the production of *Mansu* music—viz., the National Temperament—bodily, intellectual, and spiritual—of its People. Some of our traits of character are conspicuous in our proverbs. One of these is our extreme caution and deliberation. One proverb says "A slow fire makes sweet meat." Another is "Maybe the last dog is catching the hare." A third says, "Listen with both ears and then judge." One of our commonest sayings is "Tua dy leuar!" ("Time enough").

Those who call us slow generally give us the credit of being also sure. In temperament the average Manxman is something between an Irishman and a Scotchman, the enthusiasm of the one being tempered with the caution of the other. Neither-optimist nor pessimist, he picks in all things a middle course as the safest. His habitual policy is Moderation. He will not readily commit himself to an unqualified opinion or make a point-blank statement. Everything is "middlem"; "Are you quite well?" "Aw middlin'." He seldom says definitely, "It is so"; but generally "Maybe it is" or "Lek enough it is." In every statement a qualification is bound to come in somewhere.

This characteristic of moderation shows itself in all sorts of ways. It applies even to the geographical position of the island, for Cosens describes it as being in *middle corn*, and a glance at the map shows it to occupy the exact centre between the nearest points of England, Wales, Scotland, and Ireland.

Similarly, its first parliament field was placed in the exact centre of the island. Its national arms are three legs composed in a circle and so nicely balanced that, as the motto says, you may throw them whichever way you will and they will stand! Its very climate observes the "happy mean," for it is more equable than that of any other place in the United Kingdom. A wonderfully well-balanced nation, you observe. As a natural consequence, Manx music ought to be a model of symmetry, and, as a matter of fact, it is so. Indeed, this element of symmetry has served at once as an incentive, a justification, and a safeguard in restoring what are obviously missing links in a few of the melodies published in *rhua*. For instance, in our next illustration (No. 7), "Tappaghyn Jargery" ("Red top-hats"), the second section as printed in "Manx Melodies" consists of only six bars instead of the orthodox eight. So memorable is what Selwynnau calls "the tyranny of rhythm" that I have not hesitated to interpolate two additional bars to restore the balance.

"Restoration" is a delicate and a dangerous operation. Otherwise it is synonymous with "tampering" and "fiddling." Fortunately, however, in the present connection the cases are very few in which it has been found necessary to alter a single note of the melody as handed down. As regards the harmonising of these old melodies, the ground is still more dangerous. A national melody in its original surroundings is like a flower in its native soil. Its proper accompaniments are the changing sky, the sighing of the morning and evening breeze, and, above all, the life-pulse of the human hearts and voices that gave it utterance. It wants no other accompaniment. But, severed from these

surroundings, and transplanted into a foreign soil, it seems to want some artificial support. It is a plucked flower and requires a vase. The question is what kind of vase? To this question we get three answers from three different classes of musicians, the artists, the antiquarians, and the people. To steer a middle course between the requirements of these three—to hit the happy mean between naked simplicity and excessive ornamentation—is almost a hopeless task even for a moderation-loving Montemagni. In "arranging" these melodies my object has been to bring out the beauty of the tune to the utmost, and if, in investing it with "the best robe," I have in any instance erred on the side of elaboration, my plan is the desire to please the many rather than the few. With this apology I will now ask our friends to give us the next illustration (No. 8), "Heark Dhone," in which a more modern style of accompaniment has been adopted. The original ballad is a lament on the death of William Christie, who was publicly executed as a traitor in the year 1662. Opinion is divided as to whether he was really a traitor or a martyr in the cause of freedom. The melody, which is noble and pathetic, is probably older than the words. I have taken the liberty of arranging it as an instrumental elegy, without, however, altering a single note of the original air.

We have seen that the Mass peasantry are naturally superstitious. Whether in consequence of this fact, or in spite of it, they are also essentially religious. The large number and extreme simplicity of their ancient places of worship are evidences of a widespread and simple religious faith; and as in politics there are no party differences, so in religion churchmen and dissenters are bosom friends. The seeds of Christianity introduced, as some think, in the fifth century, by St. Patrick and his missionaries, seem to have found here a congenial soil. In later times John Wesley was particularly pained of his Mass preachers and of the islanders generally. He declares in his diary (1777) that in no other place had he found "so pure, so earnest, so simple, and so unpolished a people." In those days the Mass sailor before stepping on board his fishing boat was wont to repeat a prayer invoking blessings on the fruits of his toil—a custom now more honoured in the breach than the observance. From very early times an extensive native literature had existed in the form of carols. These were the fruits or accompaniments of a religious revival which, on the publication of the Bible in Mass, in 1726, rendered a mighty accession of force. Here, as elsewhere, the opening of this marvellous picture-book operated like the touch of a magic spring. It was the Bible that inspired the greatest masterpieces of literature, painting, and music—Milton's great epic, Bunyan's incomparable allegory, Raphael's cartoons, Handel's "Messiah."

So in this little kingdom of Mass it was the first opening of the Bible in the common language of the country that touched the heart and kindled the religious enthusiasm of the nation; and the result was the production of a vast number of these carols—a form of native literature which, though not of a high order, has a definite value in the history of letters.

Our two next illustrations are specimens of Mass carols: No. 9, "My dearh Vras" ("O! Dear Women"); No. 10, "Blasse Christ" ("The Death of Christ").

I will now, by your leave, state briefly the circumstances which led me to undertake the collection of these Mass melodies.

In the autumn of last year I was invited by some gentlemen in the Isle of Mass, including my brother, the Northern Deaconar, to go there with the special object of collecting what material could be found with a view to the publication of a more complete and accurate record of our national air than any that already existed. To obtain the desired material three sources were open to us—viz.:

- (1.) Printed music.
- (2.) Manuscript music.
- (3.) Oral music.

(1.) Of printed collections there already existed only one. It was published in London in the year 1850, under the title "Mass Melodies," and contains thirteen of, presumably, the then best known songs and dance tunes. The songs were set to English words by J. Barrow, and the whole of the music was arranged by "An Amateur," the name being appended. This book is practically unknown, and only a few copies appear to have survived. A cursory glance condemns the work as inadequately representative of Mass music as regards both the material and the workmanship. The task of compiling a work of this kind is by no means an easy one. The writing down of music by ear was in those days an accomplishment very rare, even among professors of the art. Hence, apart from the paucity of the material, one is not surprised to find in "Mass Melodies" many inaccuracies of musical orthography, grammar, and accentuation. Add to these difficulties the further one of respecting discrepancies and of choosing between different versions of the same tune as they appear in different manuscripts, or as the faded ghosts of them survive in the memory of living people, to say nothing of the difficulty of disentangling, at their proper value, clerical errors, and of restoring, in the least objectionable way, obvious missing links.

The next example (No. 11), "My dearh, nagh shaw dyn barraghtyn" ("We'd better wait awhile, my dear") illustrates

some of the difficulties referred to. It was, doubtless, originally, a beautiful tune in spite of the obviously mutilated version of it in "Mona Melodee." Fortunately this was one of the few apparently desperate cases I have met with in which a slight operation boldly executed makes an impracticable thing practicable. This and the two other instances already mentioned represent the full extent of my "tampering with ancient records," for which I humbly crave forgiveness.

For the beautiful English version of this song we are indebted to my friend, Mr. E. Crabb.

(2.) The next step was to collect what manuscript tunes could be obtained, and by means of these to verify, and where necessary to correct, what were obvious inaccuracies in "Mona Melodee." In this respect we were singularly fortunate. My old friend and schoolfellow, Dr. John Clague of Carlisle, a gentleman well versed in the folk-song and language of the country, and learned in all its ancient musical traditions, had been collecting material for many years past, and among his manuscripts were versions of most of the airs contained in "Mona Melodee," as well as others which had been written down by a Mr. Shepherd about the end of the last or beginning of the present century. These the doctor placed unreservedly at my disposal. Mr. Shepherd was the musical apostle of the shire at those days, an educational propagandist with a popular method of sight-singing. This was the "Fa sol la mi" method, which was popular in England during the seventeenth century, the scale being set first to the syllables *fa sol la* twice repeated, with *a mi* for the leading note, thus:—

fa	sol	la		fa	sol	la	mi		fa	sol	la		fa	sol	la
		mi					mi								
3	4	7		1	2	3	4		5	6	7		1	2	3

Mr. Shepherd's formula, according to Dr. Clague, was as follows:—

Above your *mi*, twice *fa sol la*;
Below your *mi*, twice *la sol fa*.

It may be of interest to mention that this system had the sanction of no less an authority than Purcell, who in his edition of John Playford's "Introduction to the Skill of Musick" (1694), endorses the opinion that "the four syllables are quite sufficient and less burdensome to the practitioner's memory."

(3.) As regards the third source of information,—viz., *Oral melody*, I had, at the outset, gone to the field in the hope of being able to gather material for myself at first-hand; but, alas, I was doomed to disappointment. Everybody

said it was too late. The old generation of untought singing milkmaids and whistling ploughboys, and the nice old itinerant fiddlers who used to delight the frequenters of the village inn, and the old people sitting in the cozy chimney-corners of the farmhouse, and the lasses and lads that danced in the barns at the wedding or harvest-homes—these rustic musicians had passed away (as they told me), and the old tunes were being replaced by the songs of the London music halls. However, my gleesings from other sources were not inconsiderable, and in spite of the morning odds against me, I still cherished a hope that by a carefully arranged plan of campaign we might yet discover in out-of-the-way spots on the mountains and among the solitary glens a remnant of the old folk who might still have retained some of the earlier tunes hitherto unrecorded. Nor were my hopes in vain.

A subsequent visit to the island a few weeks ago has resulted in a success far exceeding my most sanguine expectations, and in a very considerable addition to my original collection. With the assistance of my brother, and by the kind co-operation of many local friends, we had the good fortune to interview in different parts of the island quite a goodly number of old Macraes of ages ranging from sixty-five to eighty-four, all more or less musically gifted, and some of whom had in their younger days enjoyed a local reputation as singers in church, chapel, farmhouse, or inn, as the case might be. The Maori people are proverbially shy, but that was an insignificant detail. By dint of coaxing, the intervention of local companions, and in some cases the judicious application of bottles and suitable stomach in the shape of little presents of tea, for the wines and tobacco for the husbands, we soon got over their shyness, and in a very short time our ancient minstrels were warbling as in the old times and were ready and eager to give us "all the tunes that was at them." We shall never forget the enthusiasm of these old men and the genuine delight with which they recalled the songs and memories of the past; and, above all, their wonderment at seeing their songs written down in black and white and then hearing them reproduced from the written notes. And as this reproduction of their tunes by a stranger, as by magic, was a revelation to them, so was their singing a revelation to him. Imagine one, whose acquaintance with the ancient modes was confined to churches and scientific books, coming suddenly face to face with them in actual, simple, peasant life and hearing these untought sons of the soil, born and bred in their mountain solitude—imagine these essentially unecclesiastical and unscientific people actually singing "Glorias" "minstrel and perpetuating minor scales with sharp notes and flat leading notes in the style of the ancient Greeks, delightfully

unconscious all the while that they were doing anything out of the common. It is also noteworthy that to these old people the tunes published seventy-five years ago were, with only three or four exceptions, entirely unknown. They had a different signature of a totally different style and of evidently much earlier date.

As to the probable age of our music as a whole, we have at present little or no data to go upon except no internal evidence. Roughly speaking, we may arrange the tunes chronologically under three classes—early, mediæval, and modern. Under the first heading we might place all tunes older than the sixteenth century; under the second, those of the sixteenth and seventeenth centuries; and under the third, those of the eighteenth century. The tunes of the nineteenth century may safely be left to take care of themselves. What sounds one of the most recent tunes in the present collection (No. 12) must be at least one hundred years old and may be much older. It was whistled to me by a man of seventy, who had kept it in reverent memory all his lifetime as having been sung to him by his mother when he was a baby. He had never known any words to it. This is the only "song without words" that has come to my net. All the rest, even most of the dance tunes, have words, and in many instances the same tune is sung to different words. Whatever may be the origin of this charming Cradle Song, it is so treasureably suggestive of Scott's well-known words "O, hush thee, my babe," that the present alliance of words and music hardly needs an apology even to Sir Arthur Sullivan.

I will conclude this paper with a few words of retrospect.

Marginal in sharing the fate of all islands. By increased facilities of communication it is practically ceasing to be an island. The Māori are gradually losing his individuality. Like that of a worn-out coin, his image and superscription is being gradually effaced. We older Māori are repaid with some appreciation the encroachments of so-called civilization. When we revisit our old home we find the tale of civilization has rolled over our sand castles and swept them all away. National traits—physical, moral, and social—are rapidly disappearing. "Utopia, Limited," is a capital satire on Māori-land. An Anglicizing spirit pervades the island and is gradually transforming it out of its old self. There is a strange tendency to do everything "as they do in England." The ancient Hāui trees on the mountains have disappeared and in their stead we have the glare of the dancing saloons. One almost deplores, with Mr. Ruckia, the introduction of railways. Fortunately, as we think, the trains have not yet learnt to go so fast "as they do in England." One of the latest phases of this Anglicizing mania was the custom of Peat Castle with stone actually imported from England.

Some years ago they wanted a church bell and of course they went to "the neighbouring island," as they playfully call it, for an architect, and he ran them up a grand spire, "as they do in England," and the next year a Manx Boggan, in the shape of an equilateral sea-weather, made for the spire and tossed it into the adjoining field. The village of Laxey rejoices in possessing the biggest water-wheel in the world, the like of which does not exist even "in England"; and so on and so on.

Already, as we have seen, their language has gone the way of all flesh. Thanks to the members of the Manx Society, they have done good work, each in his own line, in preserving in their publications some at least of the characteristics of their nation. To these must be added the names of four notable Manxmen. Mr. Hall Caine's romances have earned for himself and his country a great, if not an altogether irreproachable reputation. My old friend and master, Mr. T. E. Brown, has, in his "Fairy's Tale Yarns," gathered up the fragments that remain of the Anglo-Manx dialect—the transition from Manx to English—and embodied them in the number of his inevitable verse. Happily his poetry will live when all traces of the original Manx language and Manx character shall have passed away. Mr. A. W. Moore, in his "Manx Note Book" and "Manx Sermons," has gathered and handed down to posterity much that is interesting and valuable in the popular folk-lore, and Mr. P. C. Kennedy is rendering valuable service in connection with the beautiful Celtic crosses and other antiquities of his native land.

Something more still remained to be done for our island—I mean in the way of catching and recording before it was too late the last lingering echoes of the old Manx ballads. To this task Mr. Moore has also with laudable zeal addressed himself, and he has announced as shortly to be published a collection of Manx songs and ballads, some of them with the accompanying tunes. On this point a word of explanation is due, if only to remove the impression which might otherwise exist that there is any feeling of rivalry or competition between Mr. Moore and myself. Though we have been working in the same field, our aims are different; not antagonistic, however, but complementary. His productions would seem to be historical and antiquarian while mine are mainly artistic. From my point of view hypothetical harmonies founded on "the correct Celtic modes," as Mr. Moore's prospectus puts it, as also the original Manx words, interesting as these are from an archaeological point of view, can have but little attraction for an average nineteenth-century musical public. Hence, as I have already stated elsewhere, my harkler aim is to present to the public only a selection of the best of the old melodies with more or less

modern harmonies (say nineteenth to eighteenth century), with suitable English words, not necessarily translations, the general "arrangement," harmonisation, and interludes being in a mode and "language understood of the people." In short, I am trying to do for the music of Manxland what Tom Moore and Sir John Stevenson did for the Irish melodies and what, in our own day, Mr. Harry Gold and his confederates have been doing for the songs of Western England. But the fact is, the world wants to see both sides of the picture, the antiquarian and the artistic, and it is perhaps as well that, as chance has ordered it, the two workers in the same field, Mr. Moore and myself, shall have wrought separately and independently of each other. It will, at least, be interesting to compare the results of our labours. As regards my own share of the work, I will only add that the task, though immensely pleasurable in many ways, has not been untried with feelings of sadness; for as such one of those venerable singers sang his song there seemed to accompany it the "measured beat and slow" of the Dance of Death. It was plain that he was singing his *Nane* *deistio*, and the reflection was irremissible that within a few short years those last of the *Mara* minstrels will have "departed in peace," and that, but for these small but timely efforts on our part, their tunes must have died with them. "Now you have got the tunes," some will ask, "are they worth preserving?" Posterity must decide. Meanwhile, if by the simple act of faithfully and reverently recording these old melodies the present writer and his fellow countrymen may be instrumental in rescuing some of them from oblivion, they will have the satisfaction of not having wrought in vain.

ILLUSTRATIONS.

1. Song—"Eik my gaish shagh'n" (The Maiden's Warning).
2. Song—"Sooree" (Courtship).
3. Song—"Mylocharra" & Moyley Churn (Praise the Lord).
4. Dance tune—"Wurdscoops" (The Raven).
5. Song—"Ny Kerra is naughty" (The Sheep under the Snow).
6. Parting song—"Te tra goll hie" (Time to go home).
7. Dance tune—"Tappaghys Janger" (Red Top Knot).
8. Song—"Bhann Dhone" (Brown Witham).
9. Carol—"My Drogh Yenn" (O! Bad Women).
10. Carol—"Rann Chenn" (The Death of Chenn).
11. Song—"My gaish, naoh Sharr dya farraghys" (We'd better wait).
12. Cradle-song—"Oh, hush thee, my babe."

Viola	...	Miss Mary S. Hemming.
Wickerolle	...	Miss Minnie B. Theobald.
Flute	...	Mr. J. Finn.
Piano	...	Miss Grace H. Smith.
Vocalist	...	Miss Dora Gill.

DISCUSSION.

THE CHAIRMAN.—There is, I am sure, only one sentiment we can express to our lecturer, that is one of thankfulness for the care he has taken in preparing this address. He drew a little contrast between the purists, the antiquarians, and the people generally in connection with music of this kind—the sacred music. I think the purists wish to have it as it originally existed, the antiquarians want the same thing, and the people as well. The purists, however, desire that everything should be brought down to us without any attempt at harmonising it with our modern ideas. One of the melodies played to us had been altered in rhythm. Now I should have liked to have it in the original version, and I think arrangements of this sort have many disadvantages. The lecturer spoke about the influence of the Bible as well as the influence of music on the Mass people. As the prophet Ezekiel says in Chapter xlviii, verse 9: "Everything shall live whither the river cometh." It is impressive and notable that where the Bible has gone so has a refining influence accompanied it. When Sir George Macfarren was leaving the Isle of Man he was asked to give a farewell concert and also to write an overture for the occasion. He naturally enquired what the occasions were, and was told two spolia, one violoncello, various flutes, one clarinet! It is not recorded whether he included any Mass melodies in his overture, but it is said that the work was a source of satisfaction to the performers—whether it was to the audience, I don't know.

In reply to a question from Mr. T. L. Southgate, as to what instruments the Mass used, and whether they were string or percussion.

Mr. Goss said the violin was popular, but he could find no authentic records of any special musical instrument used in the past. There was no distinctive instrument, and, curiously, no traces of bagpipes. He had heard of a valley of harpers, but could not find any traces of the harp. He thanked the audience for the kind reception given to his paper. It had been a labour of love, and if the subject had any recommendations at all it was that of novelty.

JUNE 11, 1893

PROFESSOR E. PROUT, MUR. DOG. DOG. ST. EDIN.,
VICE-PRESIDENT,
IN THE CHAIR.

*THE TRUMPET AS AN ORCHESTRAL
INSTRUMENT.*

By WALTER MORROW.

ORIGIN AND DESCRIPTION OF THE TRUMPET.

TRUMPETS seem to have been originated by someone discovering that sound could be produced by blowing into the opened end of the horns of animals, spiral shells, or hollow reeds, and on the use of metals being known trumpets of silver, copper, and brass were made in the form of horns and spiral shells. The *shofar* of the Hebrews and the Egyptians was a straight conical tube; the *salpêtra* of the Greeks likewise. The *schophar* and *krum* of the Hebrews were horn-shaped, and the *buccina* of the Romans was made after the fashion of a spiral shell. Judging from the conical shape of these instruments one naturally comes to the conclusion that they were not musical. They would emit only one sound—a terrific blast—which was no doubt useful for giving signals, calling an assembly, or striking terror in the heart of an enemy, &c., but there was no music.

It would take a very long time to refer to the many shapes in which these instruments from time to time came to be made and the different materials used in their manufacture; but as the object of this paper is to treat of the trumpet as an orchestral instrument, I will ask you to take a long skip over many centuries.

In the sixteenth century the trumpet had increased in length to eight feet, experimentalists having found that by lengthening their metal tubes, also by making the body of the instrument cylindrical instead of conical, they rendered it capable of producing some natural sounds as distinguished from mere noise. It was made up as follows: A mouthpiece, a cylindrical tube, about three eighths of an inch in diameter, with two bands, thus forming three lengths placed triangularly, the latter fibers makes gradually widening to a diameter of four inches in the shape of a bell. It was capable of producing the following scale or series of harmonics:—



It is technically called a scale, although it is not a "regular succession of notes proceeding by tones and semitones."

The first is called the "generator" and is produced by blowing with very loose lips into the instrument sufficient wind to fill the whole tube. A very large mouthpiece is required to produce this note, much larger than is generally used, and a player would be unable to ascend to the higher notes with such a mouthpiece. The note exists but it is never used. By compressing the lips a little so that the column of air only reaches half-way through the instrument the octave will be produced, by more pressure the third harmonic or fifth above the second C, and so on by increasing the pressure all these natural sounds can be created. Nothing has been written higher than the eighteenth, although it is possible to go beyond. These harmonics are not all correct in intonation—the seventh is flat, the eleventh is sharp, and the thirteenth flat.

In spite of the imperfections of these notes, they were freely written by the old masters, and played by the trumpeters of the time. The latter, with highly practiced lips, could manipulate the faulty notes and make them fairly tolerable. Though all these notes exist, they are not all available for one player. To produce the lower notes a large mouthpiece is necessary; for the middle notes, one a little shallower; and for the high notes, one shallower still. Consequently the old players were arranged thus: First trumpet, second trumpet, and third or principal trumpet, the last often playing an independent part; and in an old instruction book for the trumpet, by a German named Wirth, mouthpieces of different sizes are prescribed for the different parts to be played.

It was about the year 1600 that trumpets were first used in orchestras, and from that time trumpet playing reached a high point of excellence—in Germany particularly—a guild of trumpet players being established there, who preserved as secrets their methods of manipulation. From this guild descended, among the few players who were able to execute the difficult tasks set down for them in the works of John Sebastian Bach.

Judging from the trumpet parts written by Purcell, Handel, and Bach, the key of D seems to have been the key that trumpets were made in; and the higher harmonics, from the eighth to the eighteenth, seem to have been much admired, both on account of their brilliancy of tone and because they proceed by consecutive comas, enabling the players to execute florid passages. This can be seen by examining the score of Bach's Mass in B minor, in which scale passages and trills abound.

To modern musicians, accustomed to correct intonation, without taking into consideration the enormous difficulty of these parts, it seems incredible that they were ever played on trumpets; in fact, many still refuse to believe it. Others, convinced that they were played, say: "then the art of trumpet playing is lost." I believe that they were rendered on the plain D trumpet, with all the imperfections of intonation, and that the art is not lost, but the style has fallen into disuse on account of the difficulty and uncertainty of manipulating these high notes. Then we have it as a fact in history that the high trumpet part in Purcell's *Tu Domine* was rendered by an artist named Shore, who, Dr. Bridge informs me, was a friend of Purcell's. Then there is a record of another phenomenal player named Valentine Saxon, for whom Handel wrote special parts. He was the first to interpret the well-known obligato to "Let the bright seraphim" and "The trumpet shall sound."

As a further proof that what I say is correct, I propose to play a few short passages from Bach's Mass to give you an idea of how they sounded. For this purpose I have borrowed an old D trumpet, made by Johann Leonhard Elm, of Nuremberg, from my friend Mr. Walter Handford, an amateur horn player of note, and an ardent collector of old and curious instruments.

Mr. Handford says, in a letter which he kindly wrote to me: "My instrument was made by Johann Leonhard Elm, of Nuremberg" (it bears an inscription to that effect). "He is known to have worked between 1698 and 1728, as instruments of his bearing those dates are in existence. It would be safe to put it down therefore as early in the eighteenth century." That is also about the time Bach and Handel's great works were written.

THE SOPRANO TROMBONE.

Having dealt at some length with the trumpet in what may be called its natural form—that is to say, an instrument without mechanism or artificial methods of producing notes—I will now proceed to deal shortly with the various forms of trumpets which have come into use at different times. But before I do so, I may mention that a member of the Medical Association asked me to include in my paper a species of trumpet, written for by Bach under the name of "Tromba da uomo" and "Clorno"; and by Gluck in his opera "Orfeo," under the name of soprano trombone. Searching about for such an instrument, I found a very good specimen in the Egali collection at South Kensington Museum. By the courtesy of the authorities there I was allowed to examine it. Speaking to Mr. Hawkes, the instrument maker of Leicester Square, on the subject, he very kindly and unexpectedly undertook to reproduce one, which he has done.

I then saw my friend Professor Pratt, who, as you all know, is very learned in the contents of the scores of the great masters: he very kindly offered to look up something for me. A few days after I received the following letter from him:—

(Over.)

11, GREENWICH ROAD, LONDON.

May 2, 1892

DEAR MR. MANSER,

I have been looking into the question of the "Tromba da uomo" for you. It was as far as I can learn a soprano trombone, most likely in D flat. Therefore an octave above the tenor trombone. I send you three passages from Gluck's *Orfeo* written for it. We are always told when this instrument is wanted, even when (as in No. 3) Bach calls it *clarion*, because he always writes for it as a new trumpeting instrument, while he invariably writes for the ordinary trumpet in the key of C, just as Mozart or Beethoven would do.

Hoping these extracts may be of use to you, and with kind regards,

Yours very sincerely,

EDMUND PRATT.

My next trouble was to give an adequate illustration of the tone of this instrument, which could not well be done without the co-operation of other orchestral instruments. On asking my trouble known, three members of the Trombone Concert Quartet promised to come and assist me by playing the opening bars of Gluck's opera "Orfeo." This is a short quartet for four trombones, soprano, alto, tenor, and bass, which we will now play to you.

THE SLICK TRUMPET.

During the latter half of the eighteenth century, great changes in making trumpets took place. Composers wished to use trumpets in keys other than C and D, consequently shorter instruments were made, generally about sixty-seven

inches in length, giving the harmonics in the key of F. In France they were and are made shorter still, to produce the harmonics of G. But if a trumpet is shorter than sixty-seven inches it loses its distinctive quality of tone. Then there were additional (so-called) crooks, because of their shape, enabling the performer to put his trumpet in E, E flat, D and C, and by combining crooks in B, B flat, and A. These three, however, were very unsatisfactory.

A change also took place in the manner of writing trumpet parts about this time: the use of the harmonics above the twelfth being abandoned, doubtless on account of their practical difficulty and faulty intonation, and if one examines the scores of Haydn, Mozart, and Beethoven harmonics above the twelfth will seldom, if ever, be found. Composers seem to have admired the middle notes, probably on account of the fulour and grandeur of tone, as well as the more facile practicality of this part of the instrument. Since then it would appear that players of the old high parts could not be found. To improve the tone of the middle and lower register larger mouthpieces were used, which rendered the high notes extremely difficult; therefore if any of the old works were performed the trumpet parts had to be re-written or modified. Mozart modified the part in *Don Giovanni*, "Mendelssohn re-wrote the trumpet part of the "Dettingen Te Deum," and France did the same with many of Bach's works—the "Christmas" Oratorio and Bach's "Stagelikeit" particularly. Then I have taken part in performances when the first trumpet part has been played on C clarinets, producing a very curious effect, the second trumpet part, played on a trumpet proper, being very prominent, the first and higher being completely lost. We have said that the eleventh and thirteenth harmonics were very incorrect. In consequence of this players began to look round for a means of remedying these faults, and towards the end of the eighteenth century an Englishman named John Hyde conceived the idea of adding a slide to the trumpet after the manner of the trombone slide, the only difference being that it was placed at the second bend of the tubing instead of the first. This slide, when drawn out two inches and a half, of course adds five inches to the length of the tube, and its effect is to lower all the harmonics a semitone, and by drawing it out its full length a whole tone; so now we have the harmonics tripled, with one exception. There is not sufficient length of slide to lower the sixth harmonic a whole tone; this is a pity, because being so intolerably sharp it renders so many passages unplayable. It could, however, be used as E sharp in a passage like this—



The slide enabled players to perfect the eleventh and thirteenth harmonics. This is the scale:—



This is the instrument used for so many years, and with so much admired effect by the two Messrs. Thomas Harper, father and son. Their mastering of the oblique in Handel's works is something to be remembered, the younger especially. I heard him play a *Little Polacca* which he composed some years ago, and which I thought was a wonderful exhibition of the flexibility of lip he had obtained by long practice. I propose to play this for you, if you will have patience to hear it. But I am afraid it will only give you a little idea of how it sounded when Harper played it.

THE VALVE TRUMPET

(Also called *Wend's* *Trumpets*, *Trumpette à pistons*, or *Trumpette à cylindres*.)

About the year 1814 the piston, as applied to brass instruments, was invented by a Silesian named Blühmel; and a contemporary Saxxon, named Süssig, invented the cylinder. The piston has a vertical, the cylinder a rotary action. The results, however, are the same; both add tubing to the trumpet. There are usually three pistons or cylinders attached to an instrument. The middle one on being pressed down opens an extra tube about five inches long, which lowers all the harmonics a semitone or exactly the same manner that the slide of the older trumpet does. The piston nearest to the mouthpiece opens a tube about ten inches and lowers the harmonics a whole tone. The third opens a longer tube and lowers them a minor third. Thus by pressing two or three pistons down at one time an occasion requires each harmonic is lowered six semitones, corresponding with the six shifts of the trombone. We now have a complete chromatic scale of two octaves and a fifth, and any passage within a given compass is practicable.

The valve trumpet was generally adopted in Germany, but not in England; the tone of the slide trumpet being considered superior. This idea is perfectly true, the every unavoidable acute angles in the valve trumpet causing the tone to deteriorate, but not much, and when we come to consider the advantages gained, of correct intonation and

the chromatic scale being available, it is difficult to understand why this instrument was not adopted here, especially as composers, no longer tied down to the use of natural harmonies only, have written parts for this instrument.

THE CORNET-PICCOLI.

About the year 1835 a new sort of trumpet appeared under various names—e.g., the small stop trumpet, *cornopsis*, or *cornet à piston*. This is a small trumpet about fifty-four inches in length, giving the natural harmonies of B flat, with three pistons having the same power of lowering these harmonies six semitones, as in the case of the valve trumpet already mentioned.

The cornet has an agreeable tone and is comparatively easy to manipulate. It very quickly became popular, and its popularity has not declined; on the contrary, it has caused the trumpet proper to become almost obsolete. Students perceived that showy results were easy of attainment and forsook the study of the trumpet. Experienced players of the older instrument, when they were called upon to play parts written for the valve trumpet, instead of adapting themselves to the valve trumpet resorted to the cornet. Consequently, the cornet has crushed the trumpet out of the orchestra altogether. One rarely hears the sound of a real trumpet now.

I am often asked by persons seeking information, What is the difference between the trumpet and cornet, and why do you so strongly maintain that it should be used? So-and-so plays on the cornet and produces a good trumpet tone.

My answers to these questions are: First, the difference between the two is in point of length. A tube a given length has a characteristic tone. The tones of the C, D, E flat, and F trumpets are rich and full. Above the key of F a tube loses its distinctive trumpet character, therefore when the tube is shortened to B flat the tone has been left far behind.

My answer to the second part of the question is obvious. Every player of an instrument likes to produce a good tone, and if the tone of the trumpet is superior, then he should play that instrument and not use one of an inferior quality of tone.

The assertion that the cornet can be played with a trumpet tone is good, and remains good until the two are heard at the same time, and under equal conditions, then, I think, the comparison will be in favour of the trumpet. I propose to play a short passage on both instruments, you will hear the difference and judge for

themselves whether the loss of the superior quality of some which I claim for the trumpet is to be so much deplored.

Most of the good cornet players I have known during the last thirty years, having arrived at proficiency on that instrument, have at some time or other "taken to the trumpet," thinking that their already acquired ability in cornet playing would make trumpet playing comparatively easy; but after a very short trial, usually about two months, they have abandoned it as too difficult, or because they have not sufficient time to study. It is a pity that they exercise so little patience and perseverance. A man who calls himself a trumpet player should endeavour to master the whole subject of trumpet, and not be satisfied with a little tawdry popularity by playing weak cornet solos. There is much excuse for men who are very busy and really have not time to study a new instrument, but young students should make themselves acquainted with the trumpet before they get too busy, and fit themselves to fulfil the duties of a trumpet player when called upon.

There is an idea prevalent that practising the trumpet has an injurious effect on the lip for cornet playing; this is fallacious—it will improve the lip, as well as the ear and intellect. A good trumpet player can always be a good cornet player, a good cornet player cannot play the trumpet without much practice. My advice to students is to practise the latter assiduously, it will be to their ultimate benefit.

There is one thing I would advise them to guard against, it is this: Some cornet players have tried to play the trumpet and for certain reasons have given it up. Feeling some qualms of conscience that the cornet does not look well in a symphony orchestra, or in the performance of an oratorio, they have adopted what is called a "trumpetina"—a queer name. This is an instrument of the exact dimensions of a cornet—that is to say, a tube fifty-four inches long; but instead of having four bands, it has only two, and thus has something of the appearance of the trumpet, but is in reality only a cornet. It is excused by saying that it has a trumpet bore, but even this cannot make a short tube give a tone equal to the longer. I have tried it and had it tested by persons qualified to judge. It is a veritable jockey in goosecock's feathers. A deception. Do not use it or countenance it. The cornet is an honest instrument, the other is not. Get an F valve trumpet and a slide trumpet, and practise them. A satisfactory result is attainable, and is worth working for.

The principal difficulty to overcome is the pitch. This is difficult, but having become accustomed to it, the rest is easy. One other error I would like to warn students from falling into—that is, trying to play the trumpet with a cornet mouth-

piece. The tone of the instrument is at once destroyed by this, and the upper notes flattened. It is also very hard to sustain power, say through a long symphony. The cup of a trumpet mouthpiece should be hemispherical, not conical like the cornet. And the cup should not be less than five-eighths of an inch in diameter, measuring from the inner rim. I have known many young players use mouthpieces much smaller than this, for the purpose of obtaining high notes; but by so doing they sacrifice the tone of the lower part of the instrument, and in a few weeks they find, when playing on it some time, that the mouthpiece chokes, there not being room in the cup for the lips to vibrate.

Before leaving the valve trumpet, I propose to play a short solo on it.

THE BACH TRUMPET.

I should like to say a few words about a species of trumpet with which my name has become particularly associated. I mean the Bach trumpet, "so called" as the papers put it. This is a straight trumpet nearly five feet in length, with two pistons. It therefore corresponds with the cornet in A. The tone of this instrument is beautiful in the higher register, but, being only the same length as the cornet, is poor in the lower register. Having condemned the "trumpetina" I suppose I ought, in common justice, to explain why I use this "cornet in A."

Parents, when criticizing the instrument, with a shake of the head, say "Ah, I do not like the tone so well as the slide trumpet." Then I try to explain to them that it is not intended to supplant the real trumpet, but, in the words of advertisers, "is to supply a long felt want." It is constructed to accomplish what the slide and valve trumpets and trumpetina have for upwards of a hundred and fifty years failed to do—that is, to play the high parts written by John Sebastian Bach. This it is capable of doing with equal intonation, good tone, and some certainty, which I think is sufficient reason for its use. Everyone of course is not of my opinion. One writer of a notice of a performance in which I took part said that, "the trumpets aroused feelings in his breast less positive than contempt." He evidently did not like it. Well, it is difficult to please everyone.

I do not know the particulars of the story connected with an instrument of this kind, but I believe Mr. Blandford does and that he intends to enlighten you during the discussion, which I believe will take place later on. But I will tell you the history of this, my own particular trumpet.

It may be in the recollection of many here that at a festival performance of Bach's Mass in B minor, given by the Bach Choir at the Royal Albert Hall, a profusion from

Berlin, named Herr Kossiek, played the first trumpet part. A story got about that he had discovered an old trumpet in a curiosity shop at Heidelberg, made in the time of Bach, and that it was the sort of trumpet used to play the high trumpet parts. We were all in a high state of excitement to see this trumpet and hear it played, and to hear this first trumpet part which we considered impracticable on any system of trumpet which we knew. I had the pleasure of playing the second trumpet part. Herr Kossiek did not speak English or French and I could not speak German, so we did not chatter, and I got no information; but I endeavoured to see all I could. I watched him closely, and was not long in fathoming the dimensions of his trumpet and his mode of manipulation; but I noticed that he was careful to conceal his mouthpiece. Now I was very anxious to see this mouthpiece, feeling sure that a great part of the secret lay there. I made a grab at it once. He withdrew it, smiling the while, and implied by signs that it was not good for my lips to be blowing on a strange mouthpiece; however, he very courteously took off the mouthpiece and handed me his instrument to blow with my own mouthpiece. But that was not what I wanted. Nevertheless, I had to be contented, and some days after I made a drawing of his trumpet, and from that drawing Messrs. Adams & Smith, of Finsbury, made me a trumpet. But I was for a very long time experimenting with mouthpieces before I found anything satisfactory. I do not think my mouthpiece is like Kossiek's, but it is a good one and produces, I think, a better tone than his.

I was delighted with Kossiek's performance and resolved to do my best to imitate him. My first feeling on seeing his trumpet was that of disappointment, for two reasons: First, it had two pistons, and pistons were not invented in Bach's time; secondly, it stood in A, and all Bach's trumpet parts were written in C and D (more often in D₂). His trumpet, I had no reason to doubt, was as old as he said; also, it was used in Bach's time, but not in Bach's music, nor was it capable of rendering such parts as he wrote without the aid of pistons, which, as we have already said, were not then invented.

I have some extracts from a work on trumpets written about the year 1795, by J. R. Altesburg, of Halle, in which two of these A trumpets or posthorns were used in combination with four D trumpets and two kettle-drums. In these works only the natural harmonics are used, and only nine of them. The parts of Bach could not have been played on that instrument. Besides, we find the D trumpet was written for, and the natural harmonies properly belonging to that key—*crye*, Bach knew what he was writing.

No doubt Kosterick on finding that he could obtain these high notes—and it only required the addition of two pistons to enable him to play the scale of D on his A trumpet—carried his idea out. He told a friend of mine that it took him six years to practice the first trumpet part of Bach's Mass, and I believe him. All honour to him for his determination calculating in success, for in my opinion he has succeeded in introducing an instrument capable of rendering these parts even better than they were played originally, with equal quality of tone and correct intonation.

As some of my hearers to-day may not have heard the tone of this trumpet, I will play a few bars from "Mighty Lord and King all glorious," in Bach's "Christmas Oratorio," in order that you may hear the sweet and flute-like tone of the high notes, which were formerly so much admired.

In accordance with my promise made in the synopsis, I shall now say a few words about writing for the trumpet, and as I am sometimes consulted on this subject by young composers, I trust that I shall not be deemed presumptuous in giving a player's idea of how parts should be written.

Scarcely any composers now will be tied down to the plain trumpet giving the natural harmonies only. So we can pass on from that to the slide trumpet, which a very few words will dispose of. This instrument is rarely seen in an orchestra; about two players have an affection for it and like to use it in the old works, but it is looked upon with more curiosity than appreciation, and no composer trouble to write for it now. Twenty years ago they did, and I have a pleasant recollection of the glorious slide trumpet parts my friend Professor Prout used to write, notably in his cantatas "Barnabas" and "Alfred." They are the sort of parts a trumpeter loved to play.

In Professor Prout's *Primer on Instrumentation*, when speaking of the trumpet in paragraph 109, he finishes by saying: "In writing, no account need be taken of the different varieties of mechanism." And he is right. He puts the whole matter in a nutshell. You may write anything you like within a given register, say from



and you will get it played. Some composers write their trumpet parts always in C—that is to say, they treat it as a non-transposing instrument. Well, that system is a safe and easy one, no even amateurs are accustomed to read from pianoforte scores, and soon learn to transpose. But I am

afraid that the system will not encourage the use of the trumpet proper, as people, to avoid even the trouble of that little transposition, will resort to the cornet in C, which is an abomination.

German composers now-a-days nearly always write for the valve trumpet in F; it is a very brilliant instrument, and capable of playing any scaleless line.



and if parts are written for that instrument much will be done to encourage its use.

The system of changing the trumpet to D, C, B flat, B flat, and A could very well be done away with, much to the advantage of players and the success of works to be played. It is very difficult even for experienced men to be constantly changing the intervals of transposition from one note to a minor third, a fourth, or a fifth. You will find that neither horn nor trumpet players use any crooks but the F and E, and I advise composers to keep to those keys. If the E flat, D, and C crooks are written for they will never be used by players of horns or trumpets. Having three patterns, enabling the player to proceed chromatically from one note to another, other crooks than the F and E are considered by players to be unnecessary. All scales, major and minor, are available, also chords in arpeggio form.

DISCUSSION.

THE COMPOSER — We have all been very deeply interested in Mr. Warren's most valuable paper; certainly I have, for orchestral instruments and orchestration are special hobbies of mine. Talking about the earlier instruments, he quoted the Bible too, "With trumpets also and shofars." It is curious to notice that in Luther's version of the German Bible, the section which Mendelssohn set to music in his 56th Psalm, the score reads "Mit Trompeten und Posaunen" — "with trumpets and trombones." There is an interesting point with regard to the soprano trombone which our lecturer mentioned as being used in Gluck's "Orfeo." Mozart, in the Kyrie of his Mass in C minor, wrote for four trombones, including soprano trombone; and in two sets of little pieces — Divertimenti — he wrote for five trumpets, four kettle-drums,

and two flats—a curious combination, but he gets some very charming effects. I am going to add a suggestion with reference to the point that F below the middle G on the slide trumpet is always out of tune and sharp. Is it not possible that this may be because it ought to be a major tone below the G, giving the ratio eight to nine, whereas the slide only gives a minor tone with the ratio nine to ten? That, I think, is the reason why you cannot get the pure intonation of this for the slide trumpet. I most cordially endorse all Mr. Morrow said with regard to trumpets versus cornets. It is simply an abomination of desolation to play the cornet as a substitute for the trumpet. We must see that the better instrument—the trumpet—is kept in use in the orchestra, for certainly it has a fuller and rounder tone than the cornet, a fact which all must have noticed when Mr. Morrow gave us comparative illustrations on the two instruments.

Mr. BLAIR.—Mr. Morrow's interesting paper is bristling with suggestions. In referring to the difference in tone between the trumpet and the cornet, he, I think, forgets to mention that this does not arise merely from the difference in their lengths. The cornet is constructed on different lines, and the tubing immediately following the mouthpiece is also different. It is regrettable that the trumpet is not more popular, but it is exceedingly difficult to get men to take to it and keep to it. Bandmen say it is all very well learning it, but later on they will be obliged to play the cornet if they consider pounds, shillings and pence, and so long as conductors will accept the cornet for the trumpet it will be used. The matter, I believe, is entirely in the hands of conductors. I think Mr. Morrow was rather hard on the case, when he said that we cannot get music from the conch-shell. Surely the conical form includes all instruments of the bugle, horn, and tuba type.

Mr. BLANCKEN.—The difficult trumpet parts found in the scores of Bach, Handel, and others have given rise to many groundless speculations. But there is plenty of evidence derived not merely from the scores, but from contemporary instruments, engravings, and books to show that they were actually played as Mr. Morrow has illustrated them, on the simple trumpet, with a tube bent twice on itself and without mechanism. Much light is thrown on the subject by Alkenburg's "*Versuch einer Anleitung zur holländischen Trompeter und Posaekenkunst*," written by the son of a celebrated player of Beck's time. It is probable that these parts, as originally played, would sound very unpleasant to modern ears; the shallow *clarinet* mouthpiece was a hindrance to obtaining amplitude or beauty of tone, and, in spite of the player's skill, many notes of the scale were imperfectly represented by the natural harmonics. Thus Songs, writing

about 1790, insists that the eleventh and thirteenth harmonics should not be sounded in conjunction with an instrument of fixed intonation, such as the organ. Trumpet music, such as Mozart's *Divertimento* referred to by the Chairman, was very common in the seventeenth and eighteenth centuries, and the ears of audiences were quite accustomed to it, and the alteration of "The Newish" trumpet parts by Mozart was due probably to his desire for solemn rather than to the impossibility of finding performers. The "long trumpet" was discovered by Kozlock in 1801, in Heidelberg. He exhibited it at Berlin, after which it was described by Lessmann in the *Neue Berliner Musikzeitung*. It was a straight tube, four feet long, in B flat, which could be made to sound in D by an additional choke (not stated to belong to the original instrument). So far from its being a trumpet of Bach's time, there are good grounds for believing it to be about 150 years older. The results obtained on it by Kozlock were due to his skill, and not to the instrument, and ought perfectly well have been got on a genuine eighteenth century trumpet. An objection to the use of the valve trumpet is the imperfect intonation obtained by transposition. A trumpet or horn player, transposing all parts by means of the same crook, usually produces a different series of intervals in every key. No valve instrument can be constructed to give the tempered scale accurately; it is, however, possible to give the intervals of the true scale in several keys, by proper adjustment of the valve slides and variable fingering, and in performances of music written before chromatic brass instruments were introduced it is essential that these true intervals be given if their characteristic sweetness and quality is to be preserved. The distorted intervals given by the cornet are quite as objectionable as the inferior quality of its tone. It is much to be desired that horn and trumpet players who are named at our musical academies shall be taught musical acoustics in relation to their instrument.

Dr. MARTIN.—The cardinal point in the paper which has been read is the question of valve trumpet versus cornet-piston in the English orchestra. The causes which have impeded the introduction of the former in this country are, I believe, these. In the first place, the slide trumpet (peculiar to England) took and occupied the ground in advance. The slide of this, however, lowered only to the extent of two or at most three semitones (against the six scintillations of the three-valve system), and sometimes, as in the case of the instrument played on just now by the lecturer, it lowered only to the extent of a minor tone, so that the scale was still very defective. The slide trumpet was also, like the trombone, deficient in *legato*. Being thus a comparative failure the slide trumpet fell out of use, and the circumstances generally

made trumpets unpopular, and confirmed the use of the cornet-à-pistons in English orchestras. The second cause has been that, as stated in the lecture, the cornet-à-pistons is an easy instrument to play. The third cause has been that the specimens here available of the valve trumpet have been mostly military band instruments in which the mouthpiece and bore have departed from the true trumpet character; however, as correct orchestral trumpets are now readily procurable, this consideration ought not to operate. I would remark in passing that Brahms, the most prominent composer of our day, still continues in a singular manner even in his latest scores to seek to take advantage of the chromatic trumpet and writes only for the old natural trumpet, and perhaps the lecturer will find an explanation for this; but, speaking generally, the use of the valve trumpet is now universal on the Continent, with a G standard for France and an F standard for other countries. It is in England alone that this instrument is in the position of asking leave to come in. The present state of the case is, as remarked by the lecturer—namely, that our conductors have only to insist upon the trumpet being used and it would be used. I said readily because I wished to point out that the lecturer is a practical pioneer in what is really an important matter, and that he deserves much support.

Mr. Mossew.—Referring to Brahms, he is an extremely conservative that he does not choose to depart from the old ways.

A hearty vote of thanks was then accorded to the lecturer, who briefly responded.

June 28, 1935

EXTRA MEETING

HELD IN HONOUR OF THE VISIT OF

AMERICAN MUSICIANS TO EUROPE, 1895.

ADDRESS OF WELCOME

By THE PRESIDENT, SIR JOHN STAINER, M.A., MEd. Doc.,
D.C.L., PROFESSOR OF MUSIC IN THE UNIVERSITY OF
OXFORD.

LADIES AND GENTLEMEN,—I have the privilege and honour of welcoming to this meeting as guests of our Musical Association a large and influential body of American visitors, all of them, like ourselves, musicians by profession or by taste. Whether this is the first time in the history of English music that so many English and American Musicians have had the pleasurable opportunity of making the acquaintance of each other, and of exchanging thoughts, I know not, but under any circumstances I recognise this as a gathering of no ordinary kind. To say only that we are happy to see you here from the other side of the Atlantic would be to leave unaided a great many reflections which I am sure have already suggested themselves to you as well as to us. It is quite unnecessary for me to tell you, you must be fully aware that everything that passes in the United States of America is keenly watched by all serious thinkers of the old world. Every phase of your political life, every turn of your religious or philosophical thought, every effort you make to meet those difficult social problems with which we scarce know how to grapple, receives the earnest attention of us "on this side." And I must specially add, that the progress of art in your rapidly developing nation is a matter of vital importance to the future civilisation of the whole world. In short, in all spheres of mental activity men are watching to see whether you, strong and free, untrammelled by conventionality, possessing courage to attack any problem

or try any experiment, will be dependent on the painfully gained experience of older nations, or whether you have the ability, the genius, to strike out new lines for yourselves.

To-night I must naturally confine my remarks to the art of music in particular. Perhaps we European nations, guided upon older distinctions, though not without great aspirations and hope for the time to come, pride ourselves chiefly on being guardians of the art-treasures of a splendid past. You can throw yourselves into our feelings if you consider the extraordinary development of music amongst European nations, how it evolved a symmetrical scale and sweet melody out of the apparently opposing elements of church plain-song and troubadour love-ditty, how it learnt to pile melody on melody with bewildering skill in the madrigal, fugue, and polyphonic Mass, how it taught perfected instruments that they could stand alone and could tell their own wordless story, how it stole its periods and rhythms from the dance, and by their juxtaposition, development, and contrast in different keys raised forms and outlines which not only gave a distinct beauty to the musical thoughts of the most diffident and unsophisticated, but which also are found by the greatest geniuses to be unsurpassed as a model for and medium of æsthetic expression. And we in these later days have loved to use our art, whose greatest glory is its collectiveness (in the best sense of that word), bring together all these resources and add to them that power of appeal from the head and heart of the composer to the head and heart of the hearer which makes music no longer an artificial or even an æsthetic pleasure, but which constitutes it the universal language of soul to soul. Do not imagine for one moment that we consider ourselves the sole guardians of these art-treasures; you share our guardianship with us; you, of course, are partakers in our birthright. But you are more; we look upon you as trustees of art on behalf of the far off future. The day must come, and it may not be so far off as some imagine, when the natural resources of Europe shall be exhausted, and the story of the great nations now thriving on its soil shall be as the story of Rome or Greece, of Egypt or Assyria. Then will America have to render to surveying nationalists an account of her stewardship in art. Please do not think that this responsibility is so remote as to make no call on you, you our guests here to-night, for if indigenous American art is only as yet in its infancy, it believes you nevertheless to see at once that it is trained in the way it should go. We all have learnt from the pages of history how sadly a nation is thrown backward by adopting a false standard of taste, an untrue ideal of the beautiful, by neglecting the higher walks of art in order to revel in its lower pleasures. It may take centuries to bring back to the right path sentiment misdirected

during one generation. See to it that you safeguard your precious young children against incompetent teachers; see that your youths are not allowed to set their affections and waste their enthusiasm on worthless compositions; raise the general level of concert programmes; do not allow your open houses to be merely the wrestling-ground of rival German, French, or Italian schools; make the talented students of your nation realise that there is something better than parsimony—namely, the discovery of the direction of its most legitimate development, and the new departure thus involved.

In this way will you make your highly favoured nation into a cradle in which the art of music shall be so well nurtured that when it reaches its full growth in days yet to come it shall be healthy, manly, vigorous, the true successor and legitimate heir of all that long past centuries have achieved on this side of the Atlantic, and then the world will acknowledge that your trusteeship has been faithfully carried out. I know I am trespassing on your time and forbearance, but I cannot refrain from saying a few words about a branch of music in which my whole life has been passed, and to which I have devoted my best energies—I mean Church Music. We English church-musicians know no greater compliment, no higher reward for our labours, than to see our names appearing on the music lists of your churches and places of worship. We are most anxious that you should receive from us and carry on in its integrity the pure traditions of this branch of sacred art, so peculiarly national to us, but also so essentially a need of English-speaking races. I feel it to be my duty here to plead for preservation and culture of the anthem; a form of composition whose existence in England is at present seriously jeopardised by a strong wave of congregationalism. I can see no reason why a trained choir and a hearty congregation should not both find room for the exercise of their religious worship and mutual gifts in the same building; but this moderate and common-sense view does not satisfy congregational agitators, they desire to expel all trained musicians from our churches. If the anthem should lose its hold in England, I pray you to make it your adopted child. You are too sensible to imagine that it is merely an ingenious contrivance for “showing off” trained voices; you know that it has in itself the power of teaching impressively, and bringing home to the common heart the highest truths of religion.

One word more and I have done. I feel very strongly that the beautiful plain-song versicles, responses, litanies, and psalms of our prayers and liturgy should not be lightly thrown aside. On both sides of the little strip of water which separates you from us, I have found that in many

cases these beautiful records of the past have been copied by brand new compositions by the organist or musical curate. This should not be; these simple and grand specimens of plain-song, so suited to their purpose, so reverent in their subdued emotion, appeal to us, to you and to me for their protection. It may interest you to recall that the plain-song of the Prefaces of our Liturgy as sung now in St. Paul's Cathedral are notes for notes the same that rang at least 800 years ago through the vaulted roof of that ancient Cathedral which crowned the summit of the fortified hill of old Salisbury. Not a stone remains of wall or shrine, but the old Service-Office books have survived—the missal, gradual, lectionary, processional, and others, from which we can draw ancient hymns and plain-song as from a pure fount. Those devout monks, in the days when faith had not been disturbed by "knowledge which puffeth up" and asceticism had not been undone by luxury, recorded all their beautiful offices and the music of these offices because they were, even then, venerable and venerated. Do you propose to throw them into the fire to make room for neat and appropriate eclogues, fresh from the blotting-pad of Mr. A., or Dr. B., or the Reverend C., or Miss D.? I hope not! Nay, more, I fervently trust that 800 years hence these same splendid musical relics and monuments of early Christianity may be heard rolling through mighty and gorgeous American Cathedrals, mighty in their massiveness and proportions, gorgeous in the profuse richness of their internal decorations; may the old song there echo from wall to wall, from organ to baptistry, from shrine to porch, until heaven shall say then, as they say now, *do not such words, set to such music, so ancient and yet so full of life, sung by so many different races for twice 800 years, proclaim the eternal truth of the Fatherhood of God and brotherhood of man!*

Mr. R. HENNINGSEN WOODMAN.—I do not want to take up the time of this assembly, but I cannot refrain from expressing to Sir John our most cordial thanks for his kind words and warm welcome. Coming as we do from a new world, and visiting the scenes of the old world, we cannot help noticing the wide-spread influence of tradition, and we shall certainly carry away with us the most beautiful impressions of your country, buildings, and cathedrals. It is with great pleasure that we pay the respects of American musicians to those of England. Perhaps in the near future some of you may be tempted to visit America, where we have the best of music, of organs, and of cathedrals, although we have not the antiquity that is so marked a feature in your country. Whenever you do visit us I can promise you that you will receive a most cordial welcome from all American musicians.

JUNE 10, 1892

SIR JOHN STAINER, M.A., MRS. DOCT., OXON., D.C.L.,
PRESIDENT,

IN THE CHAIR.

THE ISOLATION OF MUSIC.

By WALTON SILDEN PRATT, M.A., PROFESSOR OF MUSIC AND
HYMNODOLOGY, HARTFORD THEOLOGICAL SEMINARY,
HARTFORD, CONN., U.S.A.

I AM sure that no one of the party of American visitors to which I have the honour to belong could open his lips on this occasion without first of all trying to express something of our hearty appreciation of the innumerable and ever-whelming courtesies that have been heaped upon us ever since we set foot on English soil. It falls to others who can do it more gracefully than I to make the ample acknowledgments that are due for most of these beautiful attentions. But I cannot begin this paper without tendering to the Council and the members of this famous Association a word of special recognition of the peculiar honour you have done us in asking us not only to be your guests this evening, but to participate formally in your deliberations. It would surely have been enough if you had permitted us to stand simply as listeners. But you have insisted with a cordiality which we cannot doubt that we should do more. And, while the duty is to us a most delicate and difficult one, we could not but accept it, believing that somewhere in the symphonic outburst of hospitable good will with which we have been greeted, there would be the reassuring strain of kind forbearance for any failure on our part fitly to discharge the obligation so courteously laid upon us.

When I was deputed, in spite of my earnest protest, to the special task of preparing a paper for this evening I felt that the logic of the situation dictated that the topic should be a general one. It would be unbecoming that any strictly technical question should be treated here by those who have come as pilgrims from the New World to sit at the feet of the learning of the Old. We should hesitate to offer information upon any topic of history or criticism in the presence of those whose mastery in these fields is as famous as their technical achievements. And we are held back at every point from expressing opinions by the reflection that the assumptions of music in England are widely different from those in America—so different, indeed, that what we might believe pertinent and timely may appear wholly useless to you.

I fear that anything from us of a positive and constructive nature will have a certain quality of presumption. But I imagine that the hazard is least in the direction of questions about the present and future of music as a part of general culture. Many of these questions affect every musician, whether at the middle or at the top of the ladder of technical proficiency, whether historically learned or not, whether critically equipped or not, and wherever his artistic lot is cast. The relation of music as an art and a profession to other branches of human activity is something that in the nature of things can never be fully and finally stated. But tentative and provisional studies regarding it are always in order and always have some degree of utility, if fairly and carefully made. In fulfilling the duty laid upon me this evening I can only speak for myself and out of my own private experience and reflection.

As one looks back over the history of music as a factor in modern civilization, he must be struck at many points by its singular separateness from other factors. Languages might readily be found, even in recent times, where musicians have magnified this isolation of their art, as though it were an esoteric mystery, to be fully made known only in the secret circles of the initiated. Wherever any line of human effort is elaborately followed as an absolute specialty, as it must be by those who achieve the greatest progress in it, the tendency to an isolating conception of it is inevitable. The extremely rapid development of music in the last two centuries is due to the large amount of this specialistic pursuit of it, and the natural effect of this fact upon the whole popular notion of music has been for the time being immense.

Of course there is much to be said on the other side. No careful historical student can miss the fact that music has always been escaping from academic and other arbitrary isolations. Its origin among unrefined peoples seems to

have been of the most diffuse and popular kind. It has flourished in all periods and countries. It has been warmly loved by millions of men, and has been passionately followed as a profession by thousands, representing the most diverse classes of society. It has now, after some strange vicissitudes, pushed its way into a remarkable prominence in what is called cultivated society. The centuries of striking musical achievement among certain great nations, like the Italians, the Germans, and the English, have been to them sources of pride and of a certain degree of renown.

In spite of these facts, however, it has certainly been the fashion, at least until very recently, among both musicians and outside investigators, either to set music wholly apart from other phases and agencies of civilization, or at all events so to minimize its influence that it may be almost disregarded in any serious and important summary. The disdain of music is a historic fact and a persistent social force is too often merely a part of a sweeping disdain of every artistic factor in culture. The fine arts originate in the play-instinct of man. They are born to develop somewhat in direction of trivial amusement, of idle fancy, and even of positive folly. They are often most showy where the moral values of life and the higher energies of society are least regarded or most perverted. Consequently it has sometimes been assumed that the most petty aspects of all the arts are the most characteristic, and that all nobler developments are too exceptional to be carefully weighed. Art has not seldom been considered to be only a surface decoration of life, wholly incidental and accidental to its real substance. Music, of all the fine arts, has been the most subjected to this sort of depreciation, being ranked far below architecture, sculpture, painting, and certainly all the literary arts.

One of the most conspicuous exhibitions of this tendency to neglect and thus to lower the value of artistic things is in theories of general education. I believe that it is commonly admitted that the most influential English theory of education until within a few years has been that of John Locke, the metaphysician. Now, Locke, I take it, well represents those for whose artistic discipline has far and away from all vital training of man's powers, if not subversion of it. Locke says somewhere that if a boy has "a poetic vein," his parents "should labour to have it stifled and suppressed as much as may be." "I know not what mason," he continues, "a father can have to wish his son a poet, who does not desire to have him but defiance to all other callings and business." "Poetry and gaming, which usually go together, are alike in this too, that they seldom bring any advantage but to those who have nothing else to live on." Without

stopping to scrutinize the logic that led up to this startling claim, or to run over the circumstances in the later seventeenth century which might be thought to justify it, it is enough to note that the theory of the essential uselessness of all artistic education which Locke commented has been and still is widely diffused in all English thought. The consequence has been that whole systems of popular culture have been organized, with fine art of every description absolutely ignored. Generations of educated men have been trained with one side of their natures quite forgotten. What wonder is there that to such men music, with its peculiarities as an art, stands in absolute isolation from other topics of human interest?

Supply the reaction from these extreme views it is in our day beginning to make itself felt. But before turning to that, I cannot help remarking that to my mind the church musician has peculiar opportunities for testing the force of whatever notions of the isolation of music the theories of the past have engendered. Church music has fundamental differences from what is commonly called concert music. Both are also distinguishable from what may be called household music, and from solitary or reflective music. The initial motive in all music, as to the other fine arts, is aesthetic gratification, and in most of its public developments there must remain a large emphasis on the appeal to the senses and to the instinctive tastes, absolutely without conscious moral purpose or any measurable correlation with the profounder aspects of life. In the cultivation of most music, therefore, the apparent values are simply aesthetic. All others are at least so masked that their working may vary much with different recipients. That such music should become highly speculative and so isolated is not strange, at least so long as the ultimate effects of aesthetic experiences remain philosophically in dispute.

But church music is different from other music in that it is a deliberate application of an artistic means to ends outside itself and to ends, too, that obviously belong to the highest moral and spiritual category. Church music appears to deal as an interpreter and teacher with the eternal truths of religion, to offer a language for the attainances of worship, and thus in its own peculiar way to lay a directing and unifying hand on the universal soul. Every earnest church musician must base his work on some such daring conception as this of its aims and potentials.

But I imagine that every church musician has learned by better experience that this kind of conception is not the popular one. For himself, he may claim that a weighty and profound Scriptural passage is made many times more luminous to the spiritual sense by an apt musical setting and

sundering, so that a great anthem or a true oratorio should be ranked as a transcendently powerful agency of religious impression and uplift. But how often the merely concerning theory of music cuts ruthlessly upon his hope and dream, so that what he has wrought upon is eager resentment and with a kind of prophetic ecstasy, like that of the mediæval cathedral builders, he sees taken and handled in the same firmness and wasteon spirit that has from time to time defaced and destroyed too many of the posthumous treasures of Christendom.

For himself, the church musician may claim that there is such a thing as worship in and through music, as vital and soaring as ever rose to heaven in the flame of sacrifice, the smoke of incense, or the diapody of hushed prayer. He may urge that when prayer takes to itself the persons of music and becomes praise, the blessed unity of words and tones is more complete and true as an expression of the human soul in the presence of God than any material or merely verbal symbol can be. Yet, as he watches those whom he is trying through song to lift into the highest levels of worship, how rarely does he feel the popular heart responding in evident sympathy with his heart! He mounts up as on wings of eagles, but too often cleaves the upper air alone.

On the church musician may content himself with believing that music, like every artistic influence, may at least work as an indefinite emotional quickener, unlocking the gates of the innermost heart, and ministering through the avenue of æsthetic delight and rest to a somewhat intangible growth in the warmth of soul-life, so that other influences may then seize upon the spirit and put it in touch with the divine realities. He may simply seek to make an emotional atmosphere in which religious experience may bud and blossom without really knowing why or how or to what end. And yet here, too, how much of his most loving labour is wasted, misunderstood, misapplied! He has appealed to the love of beauty that is slumbering, the love of truth and the love of righteousness, may spontaneously awake. But how rarely he finds that in the popular mind there is either a dull insensibility to beauty or a wide chasm between æsthetic and other mental activities, so that at the best he has ministered merely to a selfish and worldly craving for excitement.

These disappointments, or something like them, are the inevitable lot of most church musicians who labour with a deep philosophic sense of the mission of their art. I imagine that they befall artists of every kind. Sometimes they so crowd upon the thought as to give rise to the despairing belief that in this practical age, with its feverish material ambitions and its exaggerated estimate of merely scientific attainment, there is no room for art and the creepers of feeling

to which it belongs. What wonder that the church musician, like many a rather artist, comes to feel that he dwells apart, in a different world from the generality of men, isolated and alone!

Doubtless the preoccupation to pessimism of this sort is often strong. But, as has already been intimated, it is being offset more and more. The estrangement of music from other topics of popular interest is surely diminishing. Not only is the striking technical progress of music itself during the last half-century correcting erroneous conceptions and multiplying the number of those who have an independent personal acquaintance with it, but there is also a vigorous general reaction of thought which is steadily benefiting the status of music in common with all its sister arts. We are surely coming out of the utilitarian narrowness of the older time. One who watches the drift of our more serious literature can hardly fail to be impressed with the growing readiness to concede the importance of all the parts of man's complex nature, instead of stubbornly exalting one into domination over the rest. And, consequently, there is in progress to-day a notable re-discovery of the sensibility as intermediate between the intellect and the will. We may safely claim that this is producing a new attention to the fine arts as among the most brilliant fruits of knowledge and the most potent springs of conduct and character.

I shall not venture to enlarge on this important point, but shall confine myself to some of the applications of it to the traditional isolation of music. And for the purpose of simplicity I shall also limit myself to a single field, one in which the trend of the reaction is most easily observed, and in which it is being most effectively urged onward. I wish simply to speak of a few of the ways in which the isolation of music may be and should be removed through processes of general education. Of course, I do not know exactly what are the conditions of the problem with you here in England. What I say presupposes an American experience and an American point of view. But I suspect that there are at least some close resemblances and analogies.

We in America are struggling for the universal recognition of singing as a necessary topic of regular instruction in the public schools, beginning, of course, in the cities and large towns. We are claiming that this is only fair to the subject and to the pupils. The schools have begun to see that popular education means more than grammar, mathematics, physical science and history. The moment they admit that literary and aesthetic culture is needed to make full-rounded men and women, and that some acquaintance with the processes and products of the fine arts, literature included, is needed to prepare their pupils to enter understandingly into the life of the world, they must admit music as one

sect of parity with the other arts. Every argument that has been used for modelling or drawing, yes, for essay-writing, can be turned immediately to the help of singing.

The gain with us in this direction has so far been principally in the lower grades, in the kindergarten, the primary school, and the grammar school. The high schools are less cordial. And our colleges as yet show almost an aversion to music, except as a detached specialty. Several of our colleges, it is true, especially those for women or for both sexes, have flourishing music schools affiliated with them or incorporated in their system, where much high class technical work is done. But these advantages are chiefly confined to such pupils as have exceptional musical aptitude or, at least, an ambition to please themselves with some showy poetic accomplishments. The connection of music with the general culture that is aimed at by the prescribed studies of the regular curriculum is awfully slight. Finally, in our institutions of a university grade we have a few instances of elaborate musical courses leading to academic degrees. These courses exert a wholesome influence in that they give a scholarly standing to musical study, and often splendidly equip those who follow them. But the number of students who enter such courses is relatively small, and naturally includes hardly any but those who intend to make music a profession. The distinction between such university courses and the best of the purely technical or specialized music schools is slight.

This state of affairs has to me both a hopeful and a discouraging side. It must be admitted that there has been a great gain in recent years in the amount and the quality of our public instruction in music. There has been a steady and manifest improvement in the methods, the scope, and the purpose of such teaching. The *prestige* of the musical profession is immensely finer than it was even a generation ago. In consequence, through a variety of channels, of which public music teaching is certainly one of the most important, the significance and dignity of music as an object of effort have been decidedly advanced in popular estimation. Not only is it fashionable to make special studies as an instrumental or vocal performer, but the quiet diffusion of musical information through public instruction and through the increasing body of competent amateurs tends constantly to raise the average musical standard of our larger communities. Choral societies are steadily multiplying and plainly advancing in capacity. Concerts and recitals are becoming more frequent and better. Our church music is certainly improving at every point. The lift in the amount of popular enthusiasm about music is, on the whole, encouraging and promising.

But, on the other hand, I trust that it will not seem capricious to wonder whether this gain is all of the best sort, or, rather, whether it is clearly extending itself in the most useful directions. I fail to see in America much consistent and determined effort to articulate musical study with general culture. If a boy or girl shows musical talent, the special cultivation of it is encouraged. If a fair number of people in a community can be induced to find enjoyment in such concerts as can be arranged, the taste for such enjoyment is fostered and led in whatever ways are found to be peculiarly feasible. But I cannot but think that the training both of individuals and of the music-loving public which results tends to be over-special, to be too much detached from other topics of public interest, to remain uncorroborated or isolated. It is apt too often to make more performers and more critics of performance. Technique seems to be the end goal of too many students, and brilliance of execution the one demand of too many listeners and patrons. While the stimulus is great for those of decided musical talent, those who show no special aptitude, and who have no ambition of becoming technical experts, are too much overlooked and unprotected for. The largeness of audiences for a telling or brilliant performance increases, but combined with it is too little discrimination as to the essential value of the works chosen for rendering. We get more and better technical musicians of a certain kind, but the average popular acquaintance with the immense literature of music is curiously limited, and the average sensibility to the inner meaning of musical works is curiously dull. In a word, something of the isolation of music which in the past has come from its cultivation in an over-specialistic way is being perpetuated. It is even made a source of pride and an object of congratulation. To be practical is to some a badge of aristocratic superiority, not lightly to be shared except with those who have won admission to the mystical circle of adepts by some distinct technical achievement.

Now, I would not be understood to say a word against the strictly specialistic training of those who are to give their lives to music as a profession. The purely technical opportunities now open to the musical aspirant are surely a source of pride and strength. Without them the art of music would presently begin to stagnate and then to deteriorate. Without them we should have no masters and leaders, no authorities, no freshness of creation, no sustained enthusiasm for the exhilarating triumphs of our art. Nothing that may be said about other things should be supposed for a moment to detract from the importance of these vital processes whereby the professional existence of music is nourished and continually rejuvenated.

But I confess to a profound interest in the unproductive side of the matter, in the cultural life of the huge masses of people who will never be musicians in any technical sense, and in the creation of a popular sentiment about music that shall securely link it with the abiding interests of intellectual and spiritual life. It seems to me that as musicians we owe it to our art continually to revert to this question of the popularization of music, not simply because of a philanthropic interest in the tragically ignorant and defective, but in justice to our own theory of the universal and glorious quality of music itself. We ourselves claim to live in a musical atmosphere, and to derive therefrom something that makes us larger, higher, better men and women. We feel that this experience is due, not so much to an abnormal or entirely exceptional capacity in us that is non-existent in men generally, as to the enjoyment of special advantages and the development into full activity of powers that are at least potentially present in all men. In support of our view we often point rather proudly to the cosmopolitan character of modern music, with its growing independence of national and other boundaries, or solace ourselves with some of the golden tributes to music's universal power which the great poets have given us. Yet, if we cannot demonstrate in practice that music has a real, tangible value to all cultured people as an integral part of their culture, and that therefore it should be a consistent of general education from bottom to top, having close inter-relationships with other topics of such education, and supported by the same reasonable logic—if we cannot do this, then we are at least pursuing a phantom, if, indeed, we are not walking under false colours. Either music has the capacity and the right to become for more of a wide-working social force than hitherto, or she is not worthy of the prodigious outlay of wealth and energy that has been lavished upon her.

I realize that this whole process of thought is an irritating one to many minds. They think it foolishly theoretical, or based on premises that are dubious or hypothetical. "We all believe," they say, "in the unlimited value of music. We long for its extensive popular recognition and use. For this we are working with all our might. Why do you maintain that we are not succeeding as fully and rapidly as might be wished? Perhaps the asserted neglect of music is not so real or so unfortunate after all. Suppose that you stop finding fault, and offer some practical suggestions for improvement?" This retort—and much more in the same vein—is natural enough. Its force is evident. The challenge it makes must be met. The path of discussion we have ventured to choose leads inevitably to the hazardous conclusion of suggesting things to be desired and sought:

In advancing to this final stage of the argument I can only speak from my own standpoint. Very likely many of my fellow-Americans would approach the problem in a totally different way; and very likely, too, nothing we might say would have any special fitness to English conditions. But, after all, I comfort myself by remembering that this is not a professional lecture. I have no right or wish to pose as a master or teacher. This is only a study, a query, a groping after truth by one who feels himself a humble enquirer and nothing more. It will be enough if the tentative suggestions here offered may start other minds to point out the higher principles and the better methods which I have missed.

Trusting that these qualifications will be borne in mind as I proceed, first of all let me urge that a larger emphasis should be thrown upon general education as a prerequisite for the popular exercise of musicianship. I mean by this that there are too many cases in which gifted enthusiasts push their way into prominence in the profession with no little breadth of information, no little discipline of all the mental faculties, no slight a sympathetic sense of the myriad interests and forces in our complex modern life, that they are really unable to see the problem we have been considering, much less to do anything effectively for its solution. Our age is one of specialism, it is true; but it is also an age of the close interaction and precise co-ordination of specialities. To pursue a speciality successfully is highly commendable, provided that the specialist knows where he is in the universe of life. Greatness may consist largely in being a master in some one field; but greatness is helpless or ignominious isolation is at least half wasted, if it be not in danger of being half perverted. I cannot believe that in music, any more than in any other vocation, it is safe to expect the best success without genuine and enthusiastic comprehensiveness of contact with the actual life of humanity, such as is possible only for one whose education has been elaborate and well-rounded. For myself, I believe this to be a necessity for musicianship pure and simple; but it is incontestably a necessity for the delivery of music from its isolation as a popular power. Happily the signs of advance in this regard multiply on every hand.

Secondly, I would plead for the closer association of musical study with other forms of study. Whether or not it is penmissible as yet to make music in its higher grades an actual constituent of the curricula of all schools, colleges, and universities may be doubted. But we may be eager to see every possible musical course put into close relation with other courses in all sorts of educational institutions. As musicians, indeed, we may wish that every such introduction of music might be beyond criticism as to technical method

Yet, even where the work done is relatively feeble and fragmentary, the mere recognition of music as a topic of study in fellowship with other topics merits our hearty support. Poverty of method may be left to rectify itself. It may be that our traditional methods need the stimulus of comparison with methods in other departments. The main thing is to secure a foothold for our art in every accessible educational system, from the kindergarten to the university.

But beyond this it would surely be well if our leading music schools were all in close proximity to institutions of recognized scholastic standing. Proximity provides comparison, if not affiliation. The spirit of one school reacts helpfully on that of its neighbors. Interchange of students, of instructors, and of books and other apparatus is facilitated. Education in the large sense means learning, dexterity in its use, power in independent mental action, and the development of a healthy personality. In any one institution the balance may be imperfectly struck. The close contact of different institutions tends to correct one-sidedness in all. Music schools have sometimes ignored learning, strict scholarship, and real character-building. Other schools have too often ignored all artistic subjects, and have underrated such dexterity of action as is indispensable in art. Both classes may be benefited in ways too numerous to specify by being set side by side.

In all these regards, too, the signs of advance are encouraging. Music is finding its way into the whole system of popular education. Music schools are coming into affiliation with other schools, technical and general.

To these rather obvious points I would add a third that perhaps may need some explanation, but whose importance grows upon me with every year. I would plead for a closer following out by musicians and by educators generally of the natural analogies between music and literature as branches of popular culture. I here ask, you notice, not simply to the affiliates that draw poetry and music together, though these freely illustrate my point. But I mean that in solving the problem of fully placing music into its place in general education, the essential likeness of it to literature should be accepted and adopted as a principle of action. In what I say I only ask that the sense of the term "literature" shall be made properly comprehensive, including not only poetry but prose and oratory, and not only literary products, but the materials used, the methods employed in making them, the mental life whence they proceed and to which they minister, and the whole aspect of human personality to which they belong. "Literature," as the term must be used by a professional educator, includes not only works but workings, both expressive and impressive. The great function of literature in the

world, I assume, is the clear, adequate, and lifelike intercommunication of personalities through the medium of language, and its importance as a field of education follows from the fact that no other form of intercommunication is so full, so infinitely varied, and so universally powerful. The point I wish to urge is that, since the analogy between literature and music is far closer and more complete than was once perceived, the educational treatment of the two should be deliberately similar. In the few moments that remain to this paper I must content myself with a few rapid and scattered suggestions about one of the most pregnant and meretricious of themes.

Literature has for its vehicle speech. Music's vehicle is tone. The two converge in song. How close to each other are the processes of speaking and singing is best known by the technical students of the two as *fine arts*. My own experience as a teacher constantly reinforces the belief that the highest results in both directions depend on the frank recognition of their common ground in the use of the voice as an instrument of personal expression. A sound discipline of the literary sense, and of the musical sense as well, depends primarily on a thorough vocal training of every individual student of either. The schools are fairly ready to acknowledge the fundamental value of reading aloud as a basis for literary interpretation and for literary composition. Hand in hand with this ought to go a parallel use of singing as a basis for musical interpretation and musical composition. These propositions are not merely theoretical; they have been nobly demonstrated by the most progressive teachers. But the demonstrations have thus far been largely confined to the lower grades of study. They need to be carried up into the higher grades also. One of the most famous of our American teachers of English literature, Professor Cushman, of Cornell University, has recently said that the inward experience of the greatest masterpieces of our literature is absolutely impossible without the constant use by both teacher and pupil of actual vocal interpretation. His view is shared by an increasing number of his fellow-instructors. It may be questioned whether in the musical field we shall begin to make the best progress until singing is assigned to its full place as the pervasive and normative musical process for every student.

But this is only one side of the subject. In literary study it is clearly seen that breadth and accuracy of culture depend chiefly, not on the mere minute preparation of single extracts for expository delivery, but on the intelligent analysis of and the sympathetic familiarity with large numbers of works by many masters, on many subjects, in many styles, and appealing to many susceptibilities. "Reading," said

Lord Bacon, "maketh a full man"—meaning copious private reading for information and scope. Is it not the same with music? Technique, literary or musical, is a means, not an end. It is a necessary servant of culture, but a sorry object of worship. May we not hope that the time will come when all music teachers shall see that the goal of their work is not the preparation of isolated pieces for performance, but the cultivation in every student of the power to know for himself as first hand many works, by all sorts of compositions, in every known form, even including hundreds that never are and never can be prepared for perfect performance? And the power to read music readily and copiously should be made to lead to an insatiable desire to go on doing so till something of the whole range of musical literature is gone over. To be a somewhat striking performer may co-exist with an altogether petty and paltry musicianship, just as many an eloquent and actor is only a literary tyro or patron.

The same principle applies to concert-hearing. No one would be called a true lover of literature who merely busied himself with hearing a series of declamations of a few well-known pieces, simply applauding such succeeding conquest of their hackneyed technical difficulties. Yet how many concert goers pride themselves on a love for music when they are simply seeking the excitement of witnessing successful acrobatic feats with the fingers or the larynx. How many otherwise cultivated people have to be laboriously taught as if they were children to hear with reverence all the great musical works of the past, and to welcome with eagerness those of the present. Concert-going always involves the insidious danger that a lower impulse shall be mistaken for a higher, that the more conscious craving for a transient gratification shall be confounded with the real thirst for permanent musical culture. Happily, this danger is always being opposed by the better class of performers, to whose interpretation is as sacred and noble an art as composition, and in whose hands the creations of the past are being continually made new.

One more working out of this analogy between literature and music may be suggested. The ablest teachers of literature know that their highest duty is not to teach prose or poetry in and for themselves, as mere objective products, but to show how in these products humanity has expressed itself, how the author's personality is declared, how the author represents a period, a class, or a tendency of human development, and how in the utterance universal thoughts and sentiments are embodied and universal qualities are touched. It is the proud boast of literature that to study it is in any proper way to study and to know men in the fullest sense. I cannot but believe that music and musical education will soon

somewhat isolated and fraction until a precisely analogous ambition becomes thoroughly operative there. We may devote ourselves to the mechanism of composition or performance, we may range eagerly over the whole field of musical works and styles, we may become even learned in their formal analysis and technical criticism, and yet these achievements will be but small unless in all this study we are steadily gaining in a vital, hearty, spiritual sympathy with composers and performers as representative men, and through them with the concerted life of mankind.

I fully realize how hasty and partial are these practical suggestions. They might be much extended and profoundly illustrated. But doubtless your thought has already far outrun mine. The limitations and perversions of music in popular estimation and handling are familiar to us all. So far as these remove it from contact with human interests and efforts generally, or dis-associate it from other artists and literary skills to which it is strictly analogous, the resulting isolation demands our closest study and our most determined efforts at reform. While it is true that much is due to music and to musicians from the outside world which has not yet been cordially and universally granted, it is also true that praise from others cannot rightfully be expected so long as those who praise and call themselves musicians are not ready to render it themselves to their own magnificent art. If music deserves to become less isolated than she has been in common thought and especially in education, musicians must be foremost in believing it and in proclaiming and exemplifying their belief. Music will be to the world only what we musicians make it. It may for a time be something less; but it never can be more. It cannot be wrong far so over and over again to name each other so silly and justly to understand what music really is, and so logically and conscientiously to keep it in its due relations with its sister arts, and especially with literature, that the recognition which the earnest world is ever ready to give to whatever is true may more and more deliver music as an art, musician as artist, and the glorious literature of tone-poems and tone-dramas which music has been for centuries producing and reproducing, from the sad and false isolation in which they have too often been allowed to remain both in social life, in education, and in historic and philosophic study.

DISCUSSION.

Cas. A. RANDEGGER.—Ladies and Gentlemen, our highly distinguished Chairman has asked me to undertake a task which gives me much pleasure. It is to propose a most hearty vote of thanks to Professor Pratt for the admirable paper we have just heard. Only a keen observer, a thinker, and a sincere and enthusiastic artist could have penned such a paper, and I personally must beg to thank him for the suggestive material for thought with which he has provided us. Of course it is difficult for all our members to attend meetings like this in the middle of the season when we are so very busy, therefore you will not think it want of proper respect to you that there are not more members present. I trust the Council will obtain the permission of Professor Pratt so that all those who are absent may read his paper in the printed Proceedings of the Association, for it is a paper that should be read, marked, learned, and inwardly digested. I have to thank Sir John for asking me to propose this vote of thanks, which I do most cordially.

Mrs. OTTO GOMBERGER.—I have no claim to add to the eloquent words which have fallen from Mr. Randegger except that, that a long time ago I had the honor of spending a year in America. It is impossible to properly estimate the position of music there forty years ago and what it is now. Its record is one of continual progress. The loftiness of American views are recorded in Professor Pratt's paper, and it strikes me that they are so lofty that it will be exceptionally difficult to put them into practical shape, but it is certain that unless we put forward lofty thoughts and ideas we shall never attain to anything above the medium. It only remains for me to say that, as a member of the Council, it gives me great pleasure to welcome you, musicians practised in the highest branch of the art—sacred music—and to express the hope that, though it is the first collective visit, it will not be the last. I beg to second the vote of thanks.

Sir JOHN STUART then put the motion to the meeting and the vote of thanks to Professor Pratt was unanimously carried.

THE CHAIRMAN.—It has really given us very great pleasure to see you here. We have for some time been working at our own schools and colleges to bring about some progress in the art. Ten years ago I succeeded John Hullah, whose name is doubtless familiar to you all, and he it was who undertook to get music taught by rote through all our elementary schools. We have made great strides, and particularly in singing sweetly, for unless the children sing sweetly they receive no money grant. We have stopped singing through

the nose, and all cockney and provincial twang. I and my assistant, Mr. McNaught, go to the sixty training colleges where young men and women receive their school training, and here they sing individually before us and answer any question we may put to them, such as how they would teach in the school. It is a long and slow process, but the result will be palpable to everyone. I may say that at Oxford there is a musical club where once a week, all through terms, some distinguished professionals come down to play, and we also have the best songs sung by the best singers. In the club there is a grandson of Mendelssohn, who is an admirable pianoforte player, and we have a nephew of Joachim, who is a capital violinist. There is also a society called the Musical Union, in which the young men are supposed not to sit down and listen, but to take up and play an instrument themselves. Four students very often play a Mozart or Haydn quartet, and in this respect I think an ounce of practice is worth a ton of value. I do not propose to make the University into a music school proper, for in the Royal College and Royal Academy there are proper facilities and proper opportunities given to those desiring to enter such a course.

MR. MCNAUGHT.—I think Professor Pratt has voiced a great many thoughts that have been impressed upon my own mind. What he has said of American schools might just as well have been said of our own. We are working away with the music and singing, but one of our greatest difficulties is to get at the popular ear. If we follow the line of least resistance and give the children what they want it leads to the common-place and vulgar. If we insist upon the best music, we might as well plough the sands, for we get no satisfactory results. How can we educate the popular ear to enjoy good music? The note-singing requirements have been in use for ten years, so we have had a generation under our care. Do school children, after they have left, like good music? I am afraid not; they prefer the music hall sort. This is not only true of the lower, but also of the upper classes, for at music halls the stalls are as well filled as the gallery. In England a grant of a shilling per head is given to the schools, and between three and four million children gained it last year, a large number of whom were infants. They all have to satisfy the inspector that they are singing sweetly and from notes. I heartily agree with Professor Pratt that music should be begun with singing.



